

## **Historic, archived document**

Do not assume content reflects current scientific knowledge, policies, or practices.



# INSECT PEST SURVEY BULLETIN

Vol. 12

August 1, 1932

No. 6

## THE MORE IMPORTANT RECORDS FOR JULY, 1932

The grasshopper situation has not materially changed over the greater part of the heavily infested territory.

In the New England and East Central States white grubs were reported as abnormally abundant, and heavy flights of beetles were reported from a number of localities within this area.

The wireworm Heteroderes laurentii Guer. has been found in two additional counties in Florida and five in Alabama.

The armyworm was reported as very abundant in parts of Iowa.

The fall Hessian fly survey in Ohio indicates a very material increase of this insect, the infestation being 12.5 per cent in 1931 and 35.5 per cent this year. It was also reported as being more abundant in Indiana and Nebraska than it has been in many years, and generally abundant in Michigan and Minnesota.

The wheat stem maggot, probably associated with other wheat-stem insects, was said to be doing considerable damage in the North Central States.

The chinch bug was reported as troublesome much farther north and east than it is usually considered a serious pest. Reports of damage have come from Pennsylvania, Ohio, Nebraska, Michigan, and southern Minnesota.

Over the greater part of the infested territory the oriental fruit moth was not doing much damage.

The raspberry cane borer was reported generally from Maine, New York, and Michigan.

The fall webworm was very abundant on pecan in the South Atlantic States and the walnut caterpillar was reported as defoliating walnut in the East Central States, westward to Kansas and Nebraska.

The corn ear worm was occasioning the usual damage for this time of the year over practically the entire eastern part of the United States.

Many species of blister beetles were abnormally abundant on truck crops everywhere east of the Rocky Mountains.

The tomato psyllid occasioned serious damage to potatoes and tomatoes in parts of Colorado and Utah. In one place as many as 1,000 nymphs per hill were found.

This month the Mexican bean beetle was observed for the first time in the State of New Hampshire. It continued in destructive abundance throughout practically the entire infested territory during July.

The pea aphid was reported in outbreak numbers in the North Central States; and in parts of Wisconsin the late pea crop was totally destroyed and a large part of the early crop damaged.

The harlequin bug was reported destructive in Maryland and West Virginia, which is north of the usual destructive range.

The bagworm was quite generally reported, particularly from ornamental evergreens in the Middle Atlantic and East Central States, southward to the Gulf.

The elm leaf beetle was appearing in destructive numbers throughout the New England, Middle Atlantic, and East Central States, and there were isolated outbreaks in Kansas, Washington, and Oregon.

#### THE MORE IMPORTANT ENTOMOLOGICAL FEATURES IN CANADA, FOR JULY, 1932

The grasshopper outbreak in the Prairie Provinces has been characterized by a marked delay and irregularity in the hatching of the eggs in many localities. The outbreak is being dealt with by the widespread distribution of poisoned bait in infested areas, under the direction of provincial and municipal authorities with whom Dominion officials are cooperating. General rains have modified the severity of the situation somewhat, and have promoted good growth of all crops. In British Columbia, grasshoppers are remarkably scarce, although an increase is noted in the Chilcotin and Nicola areas where drought conditions continue to prevail.

Infestations of beet webworm larvae are widespread in the Prairie Provinces. Common weeds are chiefly subject to attack, but reports of damage to alfalfa, grain, and flax have been received from certain localities, particularly in Saskatchewan. In many areas serious damage has been effected to garden plants.

Following the exceptionally heavy flight of June beetles over a wide territory in eastern Ontario, this spring, the enormous numbers of eggs laid threaten serious crop losses by white grubs in 1933. In southern Quebec, white-grub damage is becoming increasingly pronounced.

Reports indicate that the Colorado potato beetle is abnormally abundant over a considerable part of its range in Canada.

Increased abundance of European corn borer moths and eggs has been noted in corn plots under observation in southern Ontario during the season.

Extensive injury to late-planted grain by a species of seed maggot is noted for the first time in certain areas in Saskatchewan.



The caragana beetle, or Nuttall's blister beetle, has severely damaged caragana hedges, beans, and peas in sections of the Prairie Provinces.

Severe losses of onion crops due to the onion maggot are reported in southern areas of Saskatchewan and Alberta.

The rose chafer is in outbreak form in parts of southern Ontario.

The striped cucumber beetle is destructively abundant on cucurbits throughout southern sections of eastern Canada.

In the fruit-growing areas of the Dominion, reports in general would indicate that the more important insect pests of fruit are at a low ebb.

Certain species of aphids are markedly abundant in the Prairie Provinces.

A European species of sawfly, Diprion polytonum Hartig, is infesting white and black spruce, particularly the former, throughout a large part of the Gaspé peninsula, Que. This species, which is a defoliating insect, was discovered in the Gaspé in November, 1930, but there is no evidence as to when and where it first became established there. The eastern spruce bark beetle is also attacking the trees in the affected area and has caused the death of large numbers.

The European pine shoot moth is an increasingly abundant and destructive pest in pine plantations along the north shore of Lake Erie, in southern Ontario, and occurs in light to moderate infestations throughout the Niagara peninsula. Eradication and control efforts are being continued.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

- Georgia. O. I. Snapp (July 12): Grasshoppers caused serious injury to corn at Byron before farmers used poisoned-bran bait. (July 22): The bird grasshopper (Schistocerca americana Drury) is very abundant at Fort Valley and causing considerable damage to corn, beans, cotton, and young peach trees. In one locality this grasshopper, emerging from a wheat field, had completely defoliated cotton and corn interplanted with beans in adjoining fields.
- Florida. J. R. Watson (July 26): Grasshoppers mostly, S. americana, although not epidemic as in the West, are more abundant than I have ever known them in Florida during the 20 years of my experience.
- Kentucky. W. A. Price (July 26): Grasshopper nymphs are rather abundant in the grasslands. The frequent rains during the summer have kept the meadows green and for that reason we have had no complaints regarding this pest to date. Apparently they have been content to remain in the grasslands, thus saving the cultivated crops.
- Michigan. R. Hutson (July 23): Grasshoppers (Melanoplus bivittatus Say, M. atlantis Riley, and Camnula pellucida Scudd.) are very abundant over all the upper peninsula.
- Wisconsin. E. L. Chambers and assistants (July): Grasshoppers are reported as very abundant and doing some damage throughout the State. (Abstract, J.A.H.)
- Minnesota. A. G. Ruggles (July 26): Grasshoppers are very abundant. Our campaign in Minnesota, where \$250,000 was spent for poisoned-bran bait, has succeeded in saving the small grain. We are worried now about the late crops.
- North Dakota. J. A. Munro and assistants (July): Grasshoppers are moderately to very abundant in the northeastern group of counties, also in Bottineau and Renville Counties, the predominant species being M. bivittatus. Although small areas show considerable fungus, dry weather has prevented the general prevalence of the disease. (Abstract, J.A.H.)
- Iowa. H. E. Jaques (July): We have recently completed a 1,700-mile trip around the rim of Iowa where we collected in 43 counties. As far as I can see, there are fewer grasshoppers than usual except for a few local spots.
- Nebraska. M. H. Swenk (June 20 to July 21): The situation during the month was along the line of a continued reduction of the population, in part through the direct effect of heavy rains, but more largely through the coming into activity of the fungous disease produced by Empusa grylli. Our first reports of the destruction of grasshoppers in large numbers by this disease are dated June 25, and they have continued to July 21. All over southeastern Nebraska, from Richardson County west and north to Dawson, Brown, and Stanton Counties, we have had reports, or have made observations of the prevalence of this disease during the period here covered. Beginning the last week in May a period of rainy weather began in eastern Nebraska, which continued until early in July, and during the latter part of this period the temperatures were high, producing much warm, moist, sultry weather. As a result of the direct effects



of the late May and June rains, and later the destruction of millions of partly grown or adult grasshoppers by the fungous disease, together with a heavy destruction of the pests by early poisoning operations, the grasshopper situation in eastern Nebraska has eased enormously; nevertheless, in scattered localities, grasshoppers survived in large enough numbers that they did considerable damage when they started entering the corn toward the middle of July. Such localized damage has been reported especially from Holt, Custer, Platte, Cuming, Saunders, Hall, Nuckolls, and Richardson Counties, from June 24 to July 17. Enough grasshoppers persist along the Niobrara Valley, and along the river in our northern Missouri River counties, to require continued serious attention. Rather more general injury has developed in the western half of the State.

Kansas. H. R. Bryson (July 17): The situation in Kansas is much more encouraging than it promised to be earlier in the season. Prof. G. A. Dean reports the grasshoppers very scarce in counties in northeastern Kansas where considerable damage occurred last season. Requests for information regarding poisoned-bran mash indicate that damage is expected in some western counties. Grasshoppers are quite abundant at Manhattan, but not in outbreak numbers. Wet weather in northeastern Kansas favored the spread of grasshopper disease.

Oklahoma. C. F. Stiles (July 26): Grasshoppers are extremely abundant along creek banks and fence rows in various sections of Oklahoma. The outbreak is not general, but localized in communities where there is an abundance of waste land. The yellow leg (M. differentialis Thos.) is the most abundant.

Alabama. H. P. Loding (July 17): Grasshoppers of various species in great numbers are doing damage to Satsuma orchards, dahlia plantings, and gladioli.

Mississippi. C. Lyle (July 20): On June 30 a correspondent at Holly Bluff sent specimens of grasshoppers (Schistocerca sp.) with a report that quite a bit of damage had been caused to cotton in that section, in some instances entire fields having been destroyed. Correspondents at various other points in the State, especially Yazoo City and Essex, wrote that grasshoppers were present in large numbers and causing considerable injury to cotton and soy beans.

Colorado. G. M. List (July 23): Grasshoppers are from moderately to very abundant in eastern Colorado.

Utah. G. F. Knowlton (July 12): Many species of grasshoppers are largely adult at the present time. The lesser migratory grasshopper (M. atlanis) and Packard's grasshopper (M. packardi Scudd.) were damaging wheat and alfalfa at Marysville. The warrior grasshopper (C. pellucida) is extremely abundant between Richfield and Annabella.

Nevada. G. G. Schweis (July 26): Serious outbreaks occurred on Nevada-California line and also in Douglas County, Nev. Several species of hoppers involved.

California. Monthly News Letter, Los Angeles Co. Agr. Comm. (June 29): In common with other sections of the State and country, grasshoppers have made an assault in the Antelope Valley this summer. Nine species are working on grain and alfalfa fields in the foothill district on the north side of the Valley and are causing some damage in places. Although a few acres of grain have been completely destroyed, most of the infested fields have suffered only the loss

of leaves on the stalks, allowing the heads to mature satisfactorily. The harvest has not been interfered with.

CUTWORMS (Noctuidae).

Florida. J. R. Watson (July 26): The semi-tropical army worm (Prodenia eridania Cram.) is showing up in some sections of the State. As usual, it is attacking grass as its first choice.

Maine. C. R. Phipps (July 27): Cutworms (Agrotis ypsilon Rott.) are very abundant.

Oregon. D. C. Mote (July 23): A widespread outbreak of Prodenia praefica Grote has been reported from Lane County southward, including Jackson and Klamath Counties and also a local outbreak in Yamhill County of Lycophotia margaritosa saucia Hbn. in 20 acres of alsike and 10 acres of red clover.

WHITE GRUBS (Phyllophaga spp.)

Massachusetts. A. I. Bourne (July 25): White grubs are moderately to very abundant in one potato field, where 22 grubs to a hill were collected. These fields were in sod last year. White grubs were so abundant and doing so much injury to a field of Cobblers that it was necessary to dig the field two or three weeks early in order to salvage as much of the crop as possible.

Rhode Island. A. E. Stene (July 23): White grubs are very abundant in some places.

North Carolina. R. A. St. George (July): During June larvae were active in the State Forest Nursery seed beds located near Clayton, where they caused serious injury to loblolly and shortleaf pine seedlings. During July many of the grubs were found to be parasitized by what may prove to be one of the robberflies.

Ohio. T. H. Parks (July 20): Newly set strawberry beds have suffered from more than the usual white-grub injury. In some cases beds have been torn up and planted to other crops because of the injury. In a field near Cleveland aster roots were being seriously damaged and many of the plants were dying. This ground had grown up to weeds last year.

E. W. Mendenhall (July 14): White grubs are numerous on gladiolus in a nursery at Gore, Hocking County.

Kentucky. W. A. Price (July 26): White grubs of Brood B were reported injuring strawberry plants at Russell and corn at Lexington.

Wisconsin. E. L. Chambers and assistants (July): June beetles are stripping deciduous trees in many parts of the State. (Abstract, J.A.H.)

Minnesota. A. A. Granovsky (July 11): The mass flight of June beetles is over; the maximum flight occurred about the middle of June. The adults are still found, but not in large numbers. Contrary to common opinion the oviposition readily takes place in cornfields free of weeds as well as in well cultivated raspberry patches. The eggs and newly hatched larvae were found in such situations without difficulty, especially near the oak trees.



A SCARABAEID BEETLE (Pachystethus marginatus Fab.)

North Carolina. R. W. Leiby (July 11): This beetle appears to be present in more than average numbers, causing damage to pecan and walnut trees in the eastern section of the State.

WIREWORMS (Elateridae)

Florida and Alabama. K. L. Cockerham (June): On a recent scouting trip O. T. Deen found Heteroderes laurentii Guer. in two additional counties in Florida, namely, Okaloosa and Walton and in five additional counties in Alabama, namely, Monroe, Conecuh, Covington, Geneva, and Houston.

Connecticut. D. S. Lacroix (July 2): Larvae of the eastern field wireworm (Pheletes ectypus Say) are more abundant throughout the tobacco-growing areas in the Connecticut Valley, and are working much later than in 1930 and 1931. Usually they are through by June 15 but this year have been working on plants up to July 1.

Nebraska. M. H. Swenk (June 20 to July 20): During the first week in July a Stanton County correspondent reported that he had considerable injury in his cornfield by wireworms, which proved to be the common corn wireworm (Melanotus cribulosus Lec.).

Idaho. R. W. Heagele (July 26): Wireworms, Pheletes californicus Mann., are very abundant in southern Idaho.

ASIATIC BEETLE (Anomala orientalis Waterh.)

Connecticut. R. B. Friend (July 25): The abundance of adults is about normal. Adults have been collected this year outside the quarantined area, and the insect is slowly spreading throughout the city of New Haven.

E. P. Felt (July 25): The Asiatic beetle was found in abundance in Putnam's Cemetery, Greenwich.

ASIATIC GARDEN BEETLE (Autoserica castanea Arrow)

Connecticut. E. P. Felt (July 25): The Asiatic garden beetle occurs somewhat generally on Ocean Drive West, Shippan and Stamford. This is presumably the first record for this insect in southwestern Connecticut.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

ARMYWORM (Cirphis unipuncta Haw.)

Iowa. H. E. Jaques (July): Armyworms are scarce in Howard County, moderately abundant in Dickinson, Emmet, O'Brien, Cerro Gordo, Hardin, and Crawford Counties and very abundant in Lyon and Floyd Counties.

North Dakota. J. A. Munro and assistants (July): The armyworms were first observed on July 7, and by the middle of the month were reported as very abundant in Burleigh, McLean, Stark, and Walsh Counties. (Abstract, J.A.H.)



WHEAT

HESSIAN FLY (Phytophaga destructor Say)

Ohio. T. H. Parks (July 23): At the completion of the annual wheat-insect survey the Hessian fly was found to have increased more than anticipated. The average of straws infested this year was 35.5 per cent, compared with 12.5 per cent in 1931. Since some straws carried more than one flaxseed, the infestation is now more than three times as heavy as in 1931. This has happened in spite of the fact that May and June were deficient in rainfall. Nearly all of the infested straws remained standing and matured a fair yield of high-quality wheat testing 58 to 60 pounds per bushel. Yields were under expectations in the southern half of the State owing to the drought of May and June. North of Columbus the yields were good. The fly did not cause very much reduction in yield in spite of the high infestation in some fields. Fourteen fields averaged between 70 and 92 per cent infestation, the highest infested field having been sowed after the fly-free date. This year the early-sowed fields did not carry any more infestation at harvest time than those fields sowed after the proper seeding date. The early sowed fields were heavily infested during the fall and winter, but at harvest time there were very few lodged straws in these fields and they suffered no great yield reduction. However, they did not usually yield so well as the later sowed fields, as the past winter was not severe on late wheat. During the survey more than the usual number of flaxseeds were found to be desiccated and to contain dead larvae. Parasitism was also rather high. In making the survey, ten fields were examined in each county and 100 straws examined in each field. Following are the percentages of straws found infested in each of the 24 counties surveyed: Fulton, 27; Henry, 39; Wood, 51; Putnam, 17; Seneca, 62; Huron, 68; Wyandot, 30; Richland, 28; Wayne, 58; Stark, 56; Holmes, 54; Knox, 25; Delaware, 28; Hardin, 16; Champaign, 28; Clark, 29; Miami, 47; Butler, 32; Clinton, 33; Clermont, 24; Pickaway, 20; Fairfield, 17; Ross, 7; Shelby, 52; average for State, 35.5 per cent.

Indiana. H. O. Deay (July 25): The Hessian fly is more abundant than for many years. According to our records many fields have from 90 to 98 per cent of the stubble infested. The infestation in the southwestern part of the State did not become so severe as earlier records would indicate. Infestation in the central part is much more severe than it has been for a number of years.

Michigan. R. Hutson (July 23): Generally abundant through the southern end of the lower peninsula.

Minnesota. A. G. Ruggles (July 26): Quite bad in winter wheat in a few southern counties. No definite reports from spring wheat.

Nebraska. M. H. Swenk (June 20 to July 20): Wheat harvest completed, and the fear that the Hessian fly would make severe inroads upon the yield in southeastern Nebraska were fully realized.

WHEAT STEM MAGGOT (Meromyza americana Fitch)

Michigan. R. Hutson (July 8): M. americana is present to the extent of approximately 1 per cent in most fields of barley in the lower peninsula.

Minnesota. A. G. Ruggles (July 26): The wheat stem maggot is more abundant than usual. In some fields 20 per cent of the heads are affected.

North Dakota. J. A. Munro (July 18): Wheat stem maggot widely distributed, but few reports of serious loss.

Nebraska. M. H. Swenk (July 20): During the last week in June the wheat stem maggot was found doing serious damage in some barley fields in Dodge County.

#### FRICT FLY (Oscinella frit L.)

Minnesota. A. A. Granovsky (July 11): The frit fly assumed considerable importance this year, infesting several fields about St. Paul. Some plots at the experiment station showed infestation from 10 to 35 per cent or even higher. The infested plants stooled profusely without forming heads. Injury is severe and losses are considerable.

#### SAY'S STINK BUG (Chlorochroa sayi Stal)

Utah. G. F. Knowlton (July 12): Say's plant bug is abundant and damaging the heads of barley at Beaver.

Colorado. G. M. List (July 23): Say's plant bug caused a moderate amount of injury to winter wheat in northern Colorado.

#### GREEN BUG (Toxoptera graminum Rond.)

North Dakota. J. A. Munro (July 18): A few reports of serious injury to wheat in northwestern counties have been received. Ladybird beetle and syrphid-fly larvae are checking the infestation.

#### WHEAT JOINT WORM (Harmolita tritici Fitch)

Ohio. T. H. Parks (July 23): The wheat joint worm has not increased any over last year and no serious injury has occurred. The straw infestation in different fields averaged from 0 to 8 per cent but none of the straws was bent over or lodged because of the insect. It has been many years since it has been very serious.

Wisconsin. E. L. Chambers and assistants (July): The wheat joint worm is reported as doing considerable damage over considerable areas in Oneida, Kenosha, Portage, Chippewa, Pepin, and Grand Counties. (Abstract, J.A.H.)

#### WHEAT STEM SAWFLY (Cephus cinctus Nort.)

North Dakota. J. A. Munro and assistants (July): What is probably the wheat stem sawfly, was reported as very abundant in Walsh County and moderately abundant in Burleigh and Cavalier Counties. (Abstract, J.A.H.)

#### SMUT BEETLE (Phalacrus politus Melsh.)

Nebraska. M. H. Swenk (July 20): During the third week in June the smut beetle was reported as very abundant in wheat fields in Frontier County.



WHEAT HEAD ARMYWORM (Neleucania albilinea Hbn.).

Iowa. H. E. Jaques (July 24): The wheat head armyworm is moderately abundant in Audubon County.

CORN

CHINCH BUG (Blissus leucopterus Say)

Pennsylvania. H. E. Hodgkiss (July 26): There are local infestations on corn, where damage is severe.

Ohio. T. H. Parks (July 23): Chinch bugs increased greatly during the last year and are now injuring corn in about half of the counties in western Ohio. They are most abundant where barley is being grown and have caused rather severe injury to some fields of corn. Wood County probably has more of the bugs than any other county.

North Dakota. Z. P. Metcalf (July 6): Chinch bugs are very bad on corn in Pitt County.

Indiana. H. O. Deay (July 25): The chinch bug is very abundant in De Kalb, Allen, and Huntington Counties.

Illinois. W. P. Flint (July 20): Chinch bugs are causing damage in some 30 counties as far north as Cook, Will, and Kendall Counties.

Michigan. R. Hutson (July 25): During the week of July 18 we received reports of the chinch bug from Britton, Ridgeway, Tecumseh, Milan, Dundee, and Petersburg.

Minnesota. A. G. Ruggles (July 26): Chinch bugs are definitely doing damage in Goodhue, Anoka, and Mille Lacs Counties, and probably in other counties also, but no definite reports yet.

Iowa. H. E. Jaques (July): Chinch bugs have been serious in southern Iowa, but are now much reduced in numbers. They threaten trouble for next year.

Nebraska. M. H. Swenk (July 20): Along the southern border of the State, from Nuckolls County east, and north into Lancaster County, chinch bugs have been abundant in many localities, and from June 22 to July 15 caused some damage in young corn when they moved out of the small grains, especially the barley fields.

Kansas. H. R. Bryson (July 17): The chinch bugs have increased in numbers at Manhattan during the past months and have caused some damage to corn plots adjacent to plots of thin wheat at the college agronomy farm. Scattered reports of injury were received from central Kansas. The nymphs have matured at Manhattan and the adults have dispersed over the fields. The recent dry weather has been favorable to their development and unfavorable to the growth of corn and sorghums.

CORN FLEA BEETLE (Chaetocnema pulicaria Melsh.)

Maryland. E. N. Cory (July 20): C. pulicaria was especially abundant in late June, doing a tremendous amount of damage to corn.

DESERT CORN FLEA BEETLE (Chaetocnema ectypa Horn)

Arizona. A. H. Caldwell (July 5): Desert corn flea beetles are over the entire district of Safford on corn. There are many of them.

CORN BILLBUGS (Calendra sp.)

Minnesota. A. A. Granovsky (June 23): Billbugs are abundant this year, especially in wet and low land. Several fields in Fillmore County were replanted, but were injured again quite badly.

LESSER CORN STALK BORER (Elasmopalpus lignosellus Zell.)

Alabama. J. M. Robinson (July 18): The lesser corn stalk borer is moderately abundant in field corn at Cullman, Roanoke, and Anniston.

Mississippi. C. Lyle (July 20): Cornstalks which show injury by the lesser corn stalk borer, were received from Escatawpa on July 15.

California. F. H. Wymore (July 23): The lesser corn stalk borer is moderately abundant on milo maize (Holcus sorghum). The caterpillars were attacking the young plants near the crown, causing them to topple over.

SOUTHERN CORN STALK BORER (Diatraea cramboides Grote)

New Jersey. H. H. White (July 20): Three butts of cornstalk containing insects for determination (determined as the larger corn stalk borer by W.R. Walton) were received from Cape May Court House.

Maryland. Press release, Ext. Service Univ. Md. (July 18): Farmers in many sections of Maryland are suffering serious damage to their corn crops by corn borers, according to reports received. The insect doing the damage is the larger corn stalk borer.

Virginia. H. G. Walker (July 27): The larger stalk borer is very abundant at Norfolk. About 75 per cent are now in the pupal stage, 20 per cent have emerged, and 5 per cent are still in the larval stage.

ALFALFA

ALFALFA WEEVIL (Hypera postica Gyll.)

California. M. L. Jones (June 30): The alfalfa weevil is now established in central California in the following counties: Stanislaus, San Joaquin, Alameda, Contra Costa, and Santa Clara.

A. E. Michelbacher (July 20): The alfalfa weevil is still to be found in the region around Pleasanton and Niles. It is not present in large numbers. Larvae of all stages of development as well as adults can be collected. Eggs have not been observed in the field for some little time, although the adults oviposit freely in laboratory cultures.

Colorado. G. M. List (July 23): The alfalfa weevil is moderately abundant in Mesa and Rio Blanco Counties, where some injury has been observed.



PEPPER GRASS BEETLE (Galeruca externa Say)

Minnesota. C. E. Mickel (June 21): This beetle is injuring alfalfa at Fertile.

COWPEAS

COWPEA CURCULIO (Chalcodermus aeneus Boh.)

North Carolina. W. A. Thomas (July 22): The first specimen of this insect attacking cowpeas at Chadbourn was observed today. Apparently the infestation is not so heavy as that of last year at this period.

Alabama. J. M. Robinson (July 18): The cowpea weevil is very abundant on cowpeas at Hartford, Spring Hill, Auburn, and Foley.

F R U I T I N S E C T S

COTTON LEAF WORM (Alabama argillacea Hbn.)

Texas. F. L. Thomas and associates (July 22): A. argillacea was found in the following localities: Taft, San Patricio County, 7/11/32; Los Fresnos, Cameron County, 7/20/32; San Antonio, Bexar County, 7/20/32. Larvae of all sizes were found in fields at Taft and Los Fresnos. Moths first appeared in San Antonio, no larvae seen.

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

Delaware. L. A. Stearns (July 22): There is good control of the codling moth in well sprayed orchards. Few mature first-brood larvae June 15, first first-brood moths June 30, first second-brood eggs July 8, first second-brood larvae July 12.

New York. N. Y. State Coll. Agr., Weekly News Letter (July): The peak of first-brood emergence occurred in western New York during the last week in June and side-worm injury was quite apparent during the first week in July. On the whole, however, damage during July was not so serious as during this month last year. (Abstract, J.A.H.)

Georgia. C. H. Allen (July 18): Codling moths are moderately abundant at Cornelia. Third-brood egg deposition now started.

Ohio. T. H. Parks (July 23): Codling moths are very serious in Lawrence County. It now appears that August spraying will be necessary to control the insect in the hill orchards. In central and northeastern Ohio the regular spray schedule is keeping the insect under control.

Indiana. E. O. Deay (July 25): Infestation at the beginning of the second brood at Bedford (July 2) was about the same as in 1931. The first adults of the first brood emerged at Bedford June 29 (G. E. Marshall) and the first flight of adults at Vincennes occurred July 2 (R. F. Sazama).

Illinois. W. P. Flint (July 20): Northern Illinois - No larvae taken under bands to date. Entrances as high as 15 per cent (July 9). No change during week of



July 15. Central Illinois - Moth emergence increased rapidly the latter part of the week, week of July 15. Southern Illinois - Fresh entrances in apples during past week somewhat fewer than last week in Jackson and Union Counties but somewhat more in Johnson County, week of July 15. Egg parasitism noted to be high last week.

Minnesota. A. A. Granovsky (July 11): Codling moths are moderately abundant. Un-sprayed orchards all badly infested.

Missouri. M. A. Smith (July 13): A number of apple growers in the vicinity of Marionville who have been running codling-moth bands report that they are not finding the number of worms that there were at this time last season, July 2.

Kansas. H. R. Bryson (July 18): The codling moth is moderately abundant in north-eastern Kansas. An increase in the population is reported by Dr. R. L. Parker in the apple district of northeastern Kansas due to failure of growers to clean up the culls of last season.

Wisconsin. E. L. Chambers and assistants (July): The codling moth is generally abundant throughout the State. (Abstract, J.A.H.)

Idaho. R. W. Haegeler (July 26): Codling moth is very abundant in southwest Idaho.

Utah. G. F. Knowlton (July 21): Codling moths are from moderately to very abundant in northern Utah.

Nevada. G. G. Schweis (July 26): The codling moth is very abundant in Reno. Unsprayed fruit is 90 per cent wormy.

Washington. E. J. Newcomer (July 21): Moths of the second brood began appearing in baits at Yakima in some numbers July 18. This is ten days later than in 1931.

Oregon. D. C. Mote (July 23): The adults of the second brood are now appearing in the Willamette Valley.

#### APPLE FRUIT MINER (Marmara pomonella Busck)

Arizona. A. E. Caldwell, jr. (July 5): This insect is slightly abundant on apple at Pima.

#### EYE-SPOTTED BUDMOTH (Spilonota ocellana Schiff.)

New York. N. Y. State Coll. Agr., Weekly News Letter (July): The eye-spotted budmoth was hatching July 13 in Ulster County and hatching was under full swing in Monroe County on July 25, at which time the first hatching was observed in the western part of the State. (Abstract, J.A.H.)

#### APHIDS (Aphididae)

New York. N. Y. State Coll. Agr., Weekly News Letter (July): The rosy apple aphid, Anuraphis roseus Baker, did considerable damage in both western New York and the Hudson River Valley. By the middle of the month, however, damage had about ceased. (Abstract, J.A.H.)

Wisconsin. E. L. Chambers and assistants (July): Fruit aphids are more abundant than they have been for many years. (Abstract, J.A.H.)

Massachusetts. A. I. Bourne (July 26): The rosy apple aphid, which was rather abundant in a few orchards in the State this season, had practically disappeared by July 4 or 5.

Connecticut. P. Garman (July): The rosy aphid has done considerable damage in several commercial orchards in New Haven County. It was held in check in others largely by species of Coccinellidae. Green apple aphids, Aphis pomi DeG., are apparently abundant in Litchfield County.

#### LEAFHOPPERS (Cicadellidae)

Massachusetts. A. I. Bourne (July 25): Apple leafhoppers are moderately to very abundant.

Maryland. E. N. Cory (July 21): Apple leafhoppers are very abundant.

Washington. E. J. Newcomer (July 21): Leafhoppers are extremely common in apple orchards this season. Most of them are the white apple leafhopper, Typhlocyba pomaria McAtee.

New Hampshire. L. C. Glover (July 23): Apple leafhoppers (Empoasca sp. and Typhlocyba sp.) were observed in moderate numbers in orchards in southwestern New Hampshire on July 22.

Connecticut. P. Garman (July): Considerable damage in many commercial orchards. Parasitism beginning to slow up.

#### A TINGID (Corythucha salicata Gibson)

Oregon. D. C. Mote (July 23): B. G. Thompson reports considerable damage in certain sections of the Willamette Valley by this tingid. In about 25 acres in one apple orchard the leaves have been destroyed and are falling off.

#### APPLE MAGGOT (Rhagoletis pomonella Walsh)

Massachusetts. A. I. Bourne (July 26): The first flies of the apple maggot were found to be emerging the very last days of June. From July 10 to 16 they were appearing in considerable abundance in the orchards.

New York. N. Y. State Coll. Agr., Weekly News Letter (July): Adult flies were emerging in the Hudson Valley during the last week in June, which was later than in 1931. (Abstract, J.A.H.)

Michigan. E. I. Daniel (July 9): Adult flies have appeared in our cages in the insectary from hawthorn fruits collected at Sawyer, South Haven, Ann Arbor, and East Lansing. While flies in the cages are emerging considerably ahead of those in the field, it gives us an indication as to where the infestations are.



APPLE CURCULIO (Tachypterellus quadrigibbus Say)

New York. N. Y. State Coll. Agr., Weekly News Letter (July): By July 18 about one-third of the apple curculios had pupated in eastern New York and adults started to appear on July 21 in that section of the State. (Abstract, J.A.E.)

Kansas. H. R. Bryson (July 18): The apple curculio is reported by Dr. R. L. Parker as doing considerable injury to the current year's growth of apple twigs. This, no doubt, is worse owing to the scarcity of fruit. Severe injury to the fruit has also occurred. Some orchards have a total loss of fruit due to injury by the insects in northeastern Kansas.

ROSE LEAF BEETLE (Modonota puncticollis Say)

New York. N. Y. State Coll. Agr., Weekly News Letter (July): During the first two weeks in July this insect was more abundant than at any time last year and did considerable defoliating of apple and cherry. (Abstract, J.A.E.)

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Ohio. T. H. Parks (July 19): Serious damage to apple foliage in Ashtabula County has occurred on trees not bearing and not being sprayed this year.

PEACH

PEACH BORER (Aegeria exitiosa Say)

Georgia. O. I. Snapp (June 29): The first pupa of the season was taken from a peach tree today at Fort Valley. According to our records, this is the earliest pupation for this latitude.

Tennessee. H. G. Butler (June 29): Borer treatments were omitted by most of the growers at Harriman last fall and during the present month it has become very evident that considerable injury has resulted. Several of the better orchards in which this pest has been of minor importance are now to be classed as heavily infested. Adult emergence began in the insectary and in the orchards on May 25. Since this time emergence has continued but it has been very light. Oviposition, at the insectary, began May 29.

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Connecticut. P. Garman (July 25): First-brood work scarce, second brood moderate in abundance.

Delaware. L. A. Stearns (July 22): First and second brood larvae heavily parasitized; peak of second-brood twig injury in second and third weeks of July.

Georgia. C. H. Alden (July 18): The oriental fruit moth is moderately abundant at Cornelia. Increase over 1931.

O. I. Snapp (July 20): Broods are beginning to overlap at Fort Valley. More abundant than usual on back-yard peach trees in town, but scarce in commercial peach orchards.



Indiana. H. O. Deay (July 25): Oriental fruit worms still doing severe injury where peach twig growth is vigorous. In general, twig injury was less abundant the week of July 17-23 than it was for the week of July 10-16. Since no fruit is present in most peach orchards, it is likely that apple will be severely infested later in the season.

M. B. Waite (July 28): In a report of July 16 from Vincennes Leslie Pierce states that the oriental fruit moth is more numerous than at any time since this insect was first found in that section.

Illinois. W. P. Flint (July 20): Fresh twig entrances are to be found but are scarce wherever I have made observations. (S. C. Chandler, Carbondale): No increase in visible fruit injury in the midsummer varieties has been noted but in 1,000 Champion peaches picked July 13 there was 7.8 per cent visible infestation. In a block of Belle of Georgia I could count no increase over what it was two months ago. (Observation made July 14.)

Kentucky. W. A. Price (July 26): Twig injury from oriental fruit moth is rather severe in orchards where twig growth is vigorous.

Tennessee. H. G. Butler (June 29): The twig infestation by larvae of this species has been much heavier this year at Harriman than in either 1930 or 1931. The first parasite activity was noted in twigs collected May 17. This has steadily increased.

#### PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Delaware. L. A. Stearns (July 22): First first-brood adults July 6. First-brood grubs are moderately parasitized by Triaspis curculionis Fitch.

Georgia. O. I. Snapp (July 20): Although first-generation adults began to emerge from the soil on June 16 at Fort Valley, they have not yet started to deposit second-generation eggs in the insectary. Small larvae are fairly abundant in peaches that are ripening now, but these may be from eggs deposited by overwintered adults.

Illinois. W. P. Flint (July 20): A big drop in the numbers of curculios showed in jarrings in Carbondale and Anna on July 15. Emergence from drop peach cages at Carbondale practically ceased the week ending July 15.

Tennessee. H. G. Butler (June 29): First-brood adults began to emerge from the soil at the insectary on June 21 at Harriman.

Arkansas. W. G. Amstein (July 13): Thus far none of the second-brood curculio have shown up out of the cages at Hope.

Mississippi. C. Lyle and assistants (July): The curculio was reported during the month as very abundant throughout practically the entire State. (Abstract, J. A.H.)

#### A LEAF BEETLE (Exosoma pini Schffr.)

Arizona. A. H. Caldwell (July 5): E. pini reported on peach at Safford, Graham County.

LEAF-FOOTED BUG (Leptoglossus phyllopus L.)

North Carolina. W. A. Thomas (July 8): This insect is unusually abundant on developing peaches at Chadbourn. As many as six to eight have been observed on a single peach, leaving punctures over practically all the surface. Hardly a peach on some trees has been exempt from this attack. The work of this insect is characterized by dozens of minute punctures over the outer skin with darker areas around these punctures in the flesh of the peach. This insect is also abundant on developing cowpeas where the whole pod is speckled with the punctures. In many cases the attack is so severe as to cause the young pods to dry up before the seeds are formed within.

PEAR

QUINCE CURCULIO (Conotrachelus crataegi Walsh)

New York. N. Y. State Coll. Agr., Weekly News Letter (July): The quince curculio occasioned more damage to pears than it has during the past two seasons in eastern New York. (Abstract, J.A.H.)

PEAR PSYLLA (Psyllia pyricola Foerst.)

New York. N. Y. State Coll. Agr., Weekly News Letter (July): During July the pear psylla increased, but not to such an extent as to warrant general spraying. (Abstract, J.A.H.)

CHEERRY

CHEERRY FRUIT FLY (Rhagoletis cingulata Loew)

Oregon. D. C. Mote (July 23): S. C. Jones reports that adults are still emerging in the Valley. Maggots were first found on June 28. On July 12 maggots were first found pupating.

A MITE (Eriophyes padi Wal.)

Maryland. E. N. Cory (July 20): Found on cherry at Salisbury.

RASPBERRY

RASPBERRY CANE BORER (Oberea bimaculata Oliv.)

Maine. H. B. Peirson (July 21): The raspberry cane borer is very abundant in Augusta on raspberry, strawberry, and rose.

New York. W. E. Blauvelt (June 28): Infested canes received from Niagara Falls.

Michigan. E. I. McDaniel (June 30): Never before has this insect been so numerous. It works not only in blackberries and raspberries, but also in roses quite freely. It is received from all over the State daily. Today it came in from Imlay City and East Lansing.



RASPBERRY ROOT BORER (Bombecia marginata Harr.)

Oregon. D. C. Mote (July 23): K. W. Gray reports first pupae of the raspberry borer found about July 9.

GRAPE

GRAPE LEAFHOPPER (Erythroneura comes Say)

New York. N. Y. State Coll. Agr., Weekly News Letter (July): The grape leafhopper was quite numerous throughout both eastern and western New York. The leafhoppers were still hatching in the Hudson River Valley during the first week in July, which was a week later than they were in 1931. (Abstract, J.A. H.)

Iowa. C. N. Ainslie (July 12): Swarms of leafhoppers of the Typhlocybini are attacking vines of the Beta grape in vineyards here in Sioux City. Concord and Niagara grapes appear to have been exempt from injury so far.

Nebraska. M. H. Swenk (June 20 to July 20): Grape leaves, and to a greater extent woodbine leaves, were reported injured by the grape leafhopper from July 6 to date, especially in northern Nebraska.

GRAPE PHYLLOXERA (Phylloxera vitifoliae Fitch)

Kentucky. W. A. Price (July 26): Grape phylloxera appeared abundantly in a vineyard at Flemingsburg.

GRAPE LEAF FOLDER (Desmia funeralis Hbn.)

Kentucky. W. A. Price (July 26): Grape leaf folder did considerable damage at Mayfield.

GRAPE BERRY MOTH (Polychrosis viteana Clem.)

Delaware. L. A. Stearns (July 22): First mature first-brood larvae June 30. First mature first-brood moths July 14.

A SCARABATID (Pachystethus lucicola Fab.)

Massachusetts. A. I. Bourne (July 26): A beetle which was identified as this species was sent in to this office from practically every section of the State. For the most part it was stated that the beetles were found in large numbers mainly on grapes, but they were also collected from grass, the foliage of fruit trees, and on corn, probably having alighted there more or less incidentally.

PECAN

FALL WEBWORM (Hyphantria cunea Drury)

North Carolina. R. W. Leiby (July 11): The fall webworm is more destructive to pecan foliage than usual.



South Carolina. W. A. Thomas (June 27): It was observed that this insect was particularly abundant on native hickory along the highways, especially in the swampy area near Walterboro. Hundreds of trees, mostly from 10 to 15 feet in height, carried this infestation. Pecans in the same general area showed only a light infestation.

Georgia. O. I. Snapp (June 30): The first nest of larvae was observed on a pecan tree in Fort Valley today.

Ohio. E. W. Mendenhall (June 28): The fall webworm is quite noticeable on apple, mulberry, and some other shade trees, in central Ohio.

#### WALNUT CATERPILLAR (Datana integerrima G. & R.)

Georgia. J. B. Gill (July 25): Occasional colonies of the walnut caterpillar have been observed in pecan orchards near Albany.

Florida. J. R. Watson (July 26): The walnut defoliator is becoming rather common on pecan trees, although not so serious as last year.

Ohio. T. H. Parks (July 21): Partial defoliation of walnut trees has occurred in central Ohio counties because of the presence of this insect.

Indiana. H. O. Deay (July 25): The walnut caterpillar is very abundant in the southern half of the State. One correspondent stated that nearly all of the walnuts in the southern one-third of the State were defoliated by July 18.

Nebraska. M. H. Swenk (June 20 to July 20): During the period here covered there has been a very severely injurious abundance of the walnut caterpillar on the walnut trees in southeastern Nebraska from Pawnee County west to Jefferson and Thayer Counties, and north to Otoe, Cass, Lancaster, and Douglas Counties. Many trees in this area were stripped of their leaves, between June 30 and July 15. D. B. Whelan reports the start of pupation on July 10.

Kansas. H. R. Bryson (July 17): The walnut datana has caused serious damage to walnut trees in Kansas. Reports indicate that the injury is general. A large number of trees in the vicinity of Manhattan has been completely defoliated. One grove under observation has been completely defoliated by this first brood.

Mississippi. C. Lyle (July 20): J. M. Langston reports finding, on July 11, the first colony of walnut caterpillars at State College during 1932. They were about half grown and were in a pecan tree.

#### PECAN LEAF CASE BEARER (Acrobasis palliolella Rag.)

Georgia. J. B. Gill (July 25): There is a very heavy infestation of the pecan leaf case bearer in the commercial pecan orchards of southern Georgia.

#### FIG

#### THREE-LINED FIG BORER (Ptychodes trilineatus L.)

Alabama. H. P. Loding (July 17): The roundheaded fig borer is doing great damage to old fig trees in Mobile City.

TRUCK - CROP INSECTS

CORN EAR WORM (Heliothis obsoleta Fab.)

- New York. N. Y. State Coll. Agr., Weekly News Letter (July 25): The corn ear worm is raising havoc with sweet corn again this year. Many growers of early sweet corn have given up hope of marketing any of their product, in Onondaga County.
- New Jersey. T. J. Headlee, R. C. Burdette, and C. H. Nissley (July): The corn ear worm was damaging early beans during the first week in July in the southern part of the State. (Abstract, J.A.H.)
- Pennsylvania. T. L. Guyton (July 26): The corn ear worm is very abundant in York County.
- Delaware. L. A. Stearns (July 22): Corn ear worm at Angola on July 8. Tomato fruit worm reported at Smyrna July 6.
- Virginia. H. G. Walker (July 27): The corn ear worm is very abundant on green wrap tomatoes on the eastern shore.
- Florida. J. R. Watson (July 26): The corn ear worm is very abundant as usual.
- Ohio. T. H. Parks (July): We are getting reports from many sections of the State of the injury that has been done to tomato fruits. The insect is also being found in the heart leaves and tassels of sweet corn. Heavy injury is expected to sweet corn from the later generation of larvae. Greenhouse men in Cuyahoga County are preparing to screen their greenhouses against the moths to protect the October and early winter tomato crop. These men suffered heavy loss to greenhouse tomatoes last fall.
- Indiana. L. Pierce (July 13): The early tomato crop, an important commercial crop in Knox County, is threatened with almost complete destruction on account of a very heavy infestation. Some fields were abandoned at the beginning of the picking season. In sorting over an entire truck load in one instance it was found that only 1 bushel was fit for market.
- H. O. Deay (July 25): Corn ear worm reported feeding in curl of field corn at Shoals, July 1, and Evansville, July 8; attacked bean pods at Elkhart, July 15, and at Paoli, July 16. Specimens feeding in stem of tomato were found at Lafayette, July 18. Many reports of serious injury to ears of sweet corn were received from throughout the State.
- Kentucky. W. A. Price (July 26): The corn ear worm continues to be a serious pest generally over the State on corn and tomatoes.
- Michigan. E. I. McDaniel (July 13): The corn ear worm is just beginning to give trouble in Michigan. Practically all sweet-corn growers in the vicinity of Monroe are suffering from a 50 to a 75 per cent infestation. Growers from Grand Rapids report heavy losses on sweet corn in the field and from tomatoes under glass. Yesterday we received a number of corn ear worms from Sparta where they were working on pop-corn. This particular crop is rather slow and the worms were working in the tassel. They are fully two-thirds grown. At Monroe many of the larvae are ready to pupate.



P. Hutson (July 22): We have been having quite a heavy infestation by the corn ear worm, and it is at present working at Monroe, St. Joseph, Coloma, East Lansing, Bath, Sparta, Grand Rapids, Kent City, Allegan, East Saugatuck, and Fennville. All of these reports came in between the 13th and the 22d of July. I have seen specimens from several of these places, and in all cases the corn ear worm is penetrating the sides of the ear through the husk and chewing the tassel while still rolled among the leaves.

Louisiana. C. E. Smith and P. K. Harrison (June 29): The species was unusually scarce in the vicinity of Baton Rouge during June, as determined by field observations made from time to time. On tomato and field corn only an occasional worm was found. One field of sweet corn under observation had an infestation of 50-60 per cent. Sweet corn is normally infested 100 per cent.

Mississippi. C. Lyle and assistants (July): The corn ear worm was very abundant on tomatoes in the seven northwestern counties and also doing considerable damage to tomatoes and corn throughout the northern part of the State. (Abstract, J.A.H.)

#### ZEBRA CATERPILLAR (Mamestra picta Harr.)

Nebraska. D. B. Whelan (July 20): Zebra caterpillars have been found feeding on eggplant and cabbage.

#### BLISTER BEETLES (Meloidae)

Vermont. H. L. Bailey (July 26): Say's blister beetle (Pomphopoea sayi Fab.) extremely abundant feeding on blossoms of delphinium at Barre, June 28. The gray blister beetle (Epicauta cinerea Forst.) has been reported on potato and also on monkshood and delphinium from various sections of the State, including Vernon, Barre, Craftsbury, and Sheldon.

Pennsylvania. J. N. Knull (July 16): Macrobasis unicolor Kby. has been defoliating the black locust seedlings in the Mont Alto nursery.

North Carolina. Z. P. Metcalf (July 6): The gray blister beetles, E. cinerea, are very bad on cowpeas in Cumberland County, feeding especially on buds and flowers.

Ohio. E. W. Mendenhall (July 8): E. pennsylvanica DeG. was very numerous on the small flowers of the Siberiana Pea (Caragana) plants in a nursery at Newark.

Florida. J. R. Watson (July 26): Blister beetles, E. vittata Fab., have been troublesome to peppers, especially in Alachua County.

Indiana. H. O. Deay (July 25): Blister beetles are very abundant throughout the State, especially from Lafayette northward. Three species, E. vittata, E. marginata Fab. and E. pennsylvanica, seem to be doing most of the damage. The first ones were received at the office July 7. A variety of plants are being attacked, with potatoes, tomatoes, and beets bearing the brunt of the injury.

Minnesota. A. G. Ruggles (July 26): The big bronze blister beetle, Lytta nuttalli Say, is very abundant in the northern part of the State, destroying beans.

A. A. Granovsky (June 23): The ash-gray blister beetle, M. unicolor, appeared in very large numbers in a new alfalfa field, also in cities, infesting black locust, caragana hedges, and other leguminous plants.

North Dakota. J. A. Munro (July 18): Nuttall's blister beetle, L. nuttalli, is generally distributed and causing severe injury to caragana and beans.

Iowa. H. E. Jaques (July): Blister beetles are very abundant in Floyd County.

Alabama. J. M. Robinson (July 18): Blister beetles are very abundant on O-Too-Tan Beans at Hayleyville, corn at West Blocton, and tomatoes at Marion.

Louisiana. P. K. Harrison (June 24): E. lemniscata Fab. is doing considerable damage to carrot and is also feeding on Amaranthus sp.

Mississippi. C. Lyle and assistants (July): Blister beetles, including E. vittata, and M. unicolor, have been reported as injuring soybeans and truck crops in scattered localities.

Nebraska. D. B. Whelan (June 20 to July 20): In a potato field west of Bushnell, Kimball County, the blister beetle Meloe impressus Kby. was reported as doing damage about the middle of July.

M. H. Swenk (June 20 to July 20): From several scattered counties in Nebraska, between Pawnee and Lincoln Counties, the striped blister beetle E. lemniscata was reported as abundant and injurious during the second week in July.

#### VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

Alabama. M. M. High (June 28): The following counties in Alabama have recently been found infested with the vegetable weevil: Hale, Bibb, Shelby, Chilton, Elmore, Autauga, Lowndes, Monroe, and Perry. This makes 39 infested counties in Alabama.

#### WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

Oregon. D. C. Mote (July 23): Quite injurious to garden crops in various sections of the Willamette Valley. (B. G. Thompson)

#### FALSE CHINCH BUG (Nysius ericae Schill.)

North Carolina. W. A. Thomas (July 18): These insects have become extremely abundant on some fields of berries at Chadbourn during the past few weeks and are apparently inflicting serious injury. Two hundred and ninety-eight adults and nymphs were taken from a single hill of strawberries. Several of the native weeds show a rather heavy infestation, principally of nymphs, at this time.

Minnesota. C. E. Mickel (June 21): The false chinch bug is very abundant at Mankato, injuring huckleberry.



Arizona. A. H. Caldwell (July 5): The false chinch bug seems to be all over the State in great swarms, and has done damage to all green stuff bordering fields or lots of wild mustard.

TARNISHED PLANT BUG (Lygus pratensis L.)

New York. N. Y. State Coll. of Agr., Weekly News Letter (July): The tarnished plant bug is doing considerable damage to potatoes in western New York. (Abstract, J.A.H.)

Michigan. R. Hutson (July 8): The tarnished plant bug is numerous in fields of celery at Decatur.

APHIDS (Aphididae)

Wisconsin. E. L. Chambers and assistants (July): Aphids are more abundant than they have been for many years on all truck crops. (Abstract, J.A.H.)

THRIPS (Thysanoptera)

North Carolina. W. A. Thomas (July 20): These insects are extremely abundant in the blooms of snap beans at Clarendon. The beans have been blooming for several weeks and to date no fruit has been set. Whether this failure is due to prevailing dry weather or to the unusual abundance of thrips has not yet been determined.

CRICKETS (Gryllidae)

North Carolina. W. A. Thomas (July 22): There is an unusual abundance of field crickets in the strawberry fields at Chadbourn. It is hard to determine just what damage is being done, as the runner plants have not begun to develop to any extent. The principal injury seems to occur a little later in the season when the runners are chewed off from the mother plants before the young plant roots in the soil. These insects are reported as injuring tomato fruit, cantaloupe, and a few other fruits in this section.

North Dakota. J. A. Munro and assistants (July): The black field cricket was reported as quite abundant over the greater part of the State. (Abstract, J.A.H.)

Mississippi. C. Lyle and assistants (July): Crickets, species Anurogryllus muticus DeG., have been injuring cotton in one community at Meridian, Lauderdale County, and cotton and peanuts in Neshoba County. (Abstract, J.A.H.)

CHANGA (Scapteriscus vicinus Scudd.)

Texas. Mrs. E. L. Coker (May 10): One adult female collected May 10, 1932, on plants and flowers in Orangefield, Orange County. (Det. by A. N. Caudell)

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

- New York. N. Y. State Coll. Agr., Weekly News Letter (July): The Colorado potato beetle, although present in noticeable numbers throughout the State, it is not so serious as it was last year. (Abstract, J.A.H.)
- New Jersey. T. J. Headlee, R. C. Burdette, and C. H. Nissley (July): Although Colorado potato beetles were still present in considerable numbers, the situation did not change much during the month. (Abstract, J. A. H.)
- Georgia. O. I. Snapp (July 11): Very abundant on eggplant at Fort Valley.
- Florida. J. R. Watson (July 26): The Colorado potato beetle was doing considerable damage to eggplant in Alachua County.
- Wisconsin. E. L. Chambers and assistants (July): The Colorado potato beetle is unusually abundant in all parts of the State. (Abstract, J.A.H.)
- Minnesota. A. G. Ruggles (July 26): Colorado potato beetles are very abundant over the State.
- Iowa. H. E. Jaques (July): This insect is appearing from moderately to very abundant over the State.
- Nebraska. M. H. Swenk (June 20 to July 20): The Colorado potato beetle has been more than usually abundant upon potatoes in all parts of the State, including the irrigated and dry land potato districts of western Nebraska, during the period here covered.  
D. B. Whelan (June 20 to July 20): The Colorado potato beetle was abundant in all stages on eggplant at Lincoln in July.
- Mississippi. C. Lyle and assistants (July): The Colorado potato beetle was very abundant in several northwestern Counties of the State. (Abstract, J.A.H.)
- Colorado. G. M. List (July 23): Colorado potato beetles are much more abundant than usual.
- Idaho. R. W. Haegle (July 26): The Colorado potato beetle is somewhat more abundant in southwestern Idaho than in 1931. The spread has been slight, the only new territory infested in 1932 being Owyhee County.
- Utah. G. F. Knowlton (July 21): The Colorado potato beetle has not been found in Utah so far this year.

THREE-LINED POTATO BEETLE (Lema trilineata Oliv.)

- Connecticut. D. S. Lacroix (July 1): The three-lined potato beetle is more abundant at Windsor this season than last and is more plentiful than the Colorado potato beetle.



POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

Connecticut. N. Turner (July 22): The adults have been emerging for several days. Considerable damage was done to drought-injured potatoes in the southern part of the State.

North Dakota. E. J. Taintor (July 13): Potato flea beetles are abundant.

Colorado. G. M. List (July 23): The potato flea beetle is very abundant in Weld and Morgan Counties.

TOMATO PIN WORM (Gnorimoschema lycopersicella Busck)

Florida. J. R. Watson (July 26): An insect which gave much trouble to the tomato growers about Bradenton in the late spring was bred out and identified as G. lycopersicella Busck. (Det. A. Busck)

HORNWORMS (Phlegethontius spp.)

Delaware. L. A. Stearns (July 22): P. sexta Johan. on tomato at Houston.

New Jersey. T. J. Headlee, R. C. Burdette, and C. H. Nissley (July): Severe damage by the tomato hornworm (P. quinquemaculata Haw.) was occasioned during the latter half of July in unsprayed tomato fields and pepper in the southern part of the State. (Abstract, J.A.H.)

Florida. F. S. Chamberlin (July 8): The abundance of the tobacco hornworm (P. sexta) appears to be about normal to date, in Gadsden County on tobacco.

Nebraska. D. B. Whelan (June 20 to July 20): P. sexta was found on eggplant in Lincoln.

Mississippi. J. P. Kislanko (July 20): Tomato hornworms (P. sexta) defoliated 50 per cent of the tomato plants in one field near Hattiesburg.

POTATO APHID (Illinoia solanifolii Ashm.)

New Jersey. T. J. Headlee, R. C. Burdette, and C. H. Nissley (July): The potato aphid was comparatively scarce on potatoes but was quite abundant on tomato throughout the month. (Abstract, J.A.H.)

North Dakota. J. A. Munro (July 18): The potato aphid is moderately abundant on potatoes at Fargo.

AN APHID (Megoura) Amphorophora solani Thos.)

Minnesota. A. A. Granovsky (July 11): The tomato aphid, M. solani, is very abundant and causes a great deal of injury directly and indirectly by spreading the mosaic diseases.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Vermont. H. L. Bailey (July 26): Potato leafhoppers are moderately abundant in Windham County.

Connecticut. N. Turner (July): Nymphs are injuring bush lima beans and green beans of the Black Valentine variety at Mt. Carmel. Not so abundant on Bountiful beans.

New York. N. Y. State Coll. of Agr., Weekly News Letter (July): The potato leafhopper was abundant throughout the State and some hopperburn was noticeable during the last part of the month. (Abstract, J.A.H.)

Michigan. R. Hutson (July 23): The potato leafhopper is very abundant.

Wisconsin. E. L. Chambers and assistants (July): The potato leafhopper is appearing quite generally wherever potatoes are grown. (Abstract, J.A.H.)

Minnesota. A. A. Granovsky (July 11): Potato leafhoppers are just beginning to appear in large numbers in potato fields near St. Paul. Climatic conditions so far were not so favorable for development as they were last year at this time.

North Dakota. E. J. Taintor (July 13): Leafhoppers are abundant on potatoes in Walsh County.

Iowa. H. E. Jaques (July): The potato leafhopper is from moderately to very abundant over most of the State.

#### TOMATO PSYLLID (Paratrioza cockerelli Sulc.)

Colorado. G. M. List (July 23): The tomato psyllid is moderately to very abundant in eastern Colorado and less abundant in the western part of the State. It caused very noticeable injury to tomatoes in the Arkansas Valley. The early potato crop in Weld and Morgan Counties was a loss of from 25 to 95 per cent on account of the psyllid yellows. Some psyllid yellows is showing on the late potatoes in these counties.

Utah. G. F. Knowlton (July 21): Potato psyllids are still causing serious damage to potatoes in many parts of Utah, while the crop is almost unaffected in other localities. (July 25): Potatoes in several parts of Davis and Weber Counties are being seriously damaged. On the Davis County Experimental Farm at Farmington from 500 to 1,000 nymphs have been counted per hill in a number of cases.

#### EGGPLANT

##### EGGPLANT LACEBUG (Gargaphia solani Heid.)

Maryland. C. H. Hanson (July 18): The insects are so serious on our eggplants at Forest Glen that we are thinking of giving up our attempts to grow this vegetable.

##### EGGPLANT FLEA BEETLE (Epitrix fuscula Crotch)

Indiana. H. O. Deay (July 25): A new generation of adult flea beetles were appearing on eggplant at Lafayette, July 16. Undusted plants were nearly defoliated by July 22.



Nebraska. D. B. Whelan (June 20 to July 20): Eggplant leaves were being badly riddled by the flea beetle in Lincoln.

A LEAF BEETLE (Gratiana pallidula Boh.)

Nebraska. D. B. Whelan (June 20 to July 20): Cassida pallidula was found on eggplant in Lincoln.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

New Hampshire. L. C. Glover (July 23): On June 22 two adults were found feeding on field beans in East Westmoreland. First-generation larvae and newly-formed pupae were found in Nashua on July 19, and since that time larvae have been found in Marlboro, Cheshire, Hinsdale, Hollis, Wilton, and Concord. First-generation adults were found in Hollis on July 22. Apparently the beetle is generally distributed in southwestern New Hampshire.

Vermont. H. L. Bailey (July 26): Mexican bean beetles are very abundant at Brattleboro and Vernon; moderately abundant so far at Putney, and reported in Newfane.

Massachusetts. A. I. Bourne (July 26): Mexican bean beetle has been much more abundant in the sections of the State now infested than was the case last year. This is particularly true of the lower half of the Connecticut Valley. In Hamden County in fields which were not protected by spray or dust during the early season, the beetles have practically stripped the plants and rendered the crop worthless. By the middle of July the first-brood larvae were maturing and numerous pupae were found. At the present time the adults of the first summer brood are beginning to appear in considerable numbers. The infestation is not quite so serious in the eastern part of the State and in the more northern sections where the species has more recently established itself, but present indications point to a rather heavy infestation during the later broods and the danger of considerable injury if prompt measures for control are not put into effect.

Rhode Island. A. E. Stene (July 23): The Mexican bean beetle is very abundant and generally distributed.

Connecticut. N. Turner (July 22): The first-generation adults are now appearing. First-generation damage was general and severe on garden beans.

New York. N. Y. State Coll. of Agr., Weekly News Letter (June 27): The Mexican bean beetle is more generally distributed and is doing more damage here than ever before in Greene County.

Pennsylvania. J. N. Knull (July 16): The Mexican bean beetle is very abundant in Franklin County this year. The overwintering adults and first-generation larvae have done an immense amount of damage to beans in gardens.

Maryland. E. M. Cory (July 21): The Mexican bean beetle is very abundant.

Virginia. H. G. Walker (July 27): The Mexican bean beetle is moderately abundant.

North Carolina. R. W. Leiby (July 11): This pest has been more destructive thus far this season than ever in its history. Damage and destruction include acres of snap beans grown on a commercial scale. They have not been limited to gardens.

South Carolina. A. Lutken (July 25): The Mexican bean beetle is very abundant generally.

Georgia. C. H. Alden (July 18): The Mexican bean beetle is very abundant at Cornelia, where it is ruining snap beans where no **control** measures have been applied.

Ohio. T. H. Parks (July 23): This insect is very abundant and doing great damage all over Ohio. Many bean plantings have been ruined.

Indiana. H. O. Deay (July 25): The Mexican bean beetle is very abundant over the whole State except the northwestern part. Over 40 inquiries from county agents in regard to its control were received, most of these coming from the northern and central western part of the State where it has done very little commercial damage until this season. Considerable damage is being done at Lafayette, although but one beetle had ever been taken there until this season.

Illinois. W. P. Flint (July 20): This beetle was found at a number of points in eastern Illinois as far west as Urbana. The Mexican bean beetle is causing some damage to beans in these sections. This insect was first found in Edwards County at Albion on June 6. On June 16 it was located again at Albion, Lawrenceville, and Mt. Carmel. Beetles were found in Robinson, Crawford County, on June 21. July 7 first beetles were found in Urbana, Champaign County.

Kentucky. W. A. Price (July 26): The Mexican bean beetles have been troublesome over the State generally during the past month.

Michigan. E. I. McDaniel (July 6): Today we received a sample of the Mexican bean beetle from Decatur which is very near the west coast of the State. This is the first time the beetle has appeared in the western part of the State.

Alabama. J. M. Robinson (July 18): The Mexican bean beetle is moderately abundant at Auburn and LaFayette.

#### PEAS

#### PEA APHID (*Illinoia pisi* Kalt.)

Wisconsin. E. L. Chambers and assistants (July): The pea aphid is very seriously affecting the canning crop in 25 counties in east-central and northeast-



ern Wisconsin. In places the late crop has been totally destroyed and a large part of the early crop damaged. (Abstract, J.A.H.)

Minnesota. A. A. Granovsky (July 11): The pea aphid practically ruined some of the canning peas in the southeastern part of the State.

North Dakota. J. A. Munro (July 18): The pea aphid situation much improved since last report. Aphid enemies have checked its development.

Nebraska. M. H. Swenk (June 20 to July 20): In Cuming and other counties, during the latter part of June, sweet peas were attacked to a serious extent.

Utah. G. F. Knowlton (June 30): Pea aphids are moderately abundant to rather abundant on field peas and alfalfa in many parts of Weber County.

### CABBAGE

#### IMPORTED CABBAGE WORM (Ascia rapae L.)

Indiana. H. O. Deay (July 25): The imported cabbage worm is very abundant over the entire State.

Michigan. R. Hutson (July 23): The imported cabbage worm is very abundant.

Wisconsin. E. L. Chambers and assistants (July): The imported cabbage worm is very abundant throughout the State. (Abstract, J.A.H.)

Minnesota. A. A. Granovsky (July 11): The imported cabbage worm is moderately abundant in most of the cabbage fields.

Nebraska. D. B. Whelan (June 20 to July 20): The cabbage worm has been more than usually troublesome on cabbage in all parts of the State during the period here covered. At Lincoln this species formed 79 per cent of all the caterpillars collected on cabbage. It completely killed newly-set fall cabbage plants. The peak of pupation of the worms collected occurred on July 20.

Utah. G. F. Knowlton (July 21): Larvae are doing their usual damage in northern Utah.

#### DIAMOND-BACK MOTH (Plutella maculipennis Curt.)

Minnesota. A. A. Granovsky (July 11): Very abundant in some cabbage, rape, and cauliflower fields and doing considerable damage.

Oregon. D. C. Mote (July 23): There is a very serious infestation throughout the entire lower Willamette Valley and coast counties on rape, cauliflower, turnips, cabbage, etc.

#### CABBAGE LOOPER (Autographa brassicae Riley)

Nebraska. D. B. Whelan (June 20 to July 20): The cabbage looper constituted 20 per cent of all the worms found on cabbage at Lincoln. This species caused quite a little damage to newly-set fall cabbages.

Colorado. G. M. List (July 23): The cabbage looper is moderately abundant in the mountain-head-lettuce and pea-growing regions. The second brood is causing considerable injury at this time.

Minnesota. A. A. Granovsky (July 11): The cabbage looper is common.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Maryland. E. N. Cory (July 20): The harlequin bug is very injurious on cabbage and other cucurbits in southern Maryland.

West Virginia. L. M. Peairs (July 21): I wish to call your particular attention to the harlequin bug which has not appeared on a West Virginia report for possibly 15 years. I have records of these insects in injurious numbers from the following counties: Cabell, Mason, Lincoln, Wyoming, Pendleton, and Jefferson, all within the past week or ten days. One report states that a few were seen in the late summer of 1931. It is probable that the mild winter permitted the late summer migrants of 1931 to survive in sufficient numbers to cause the infestation.

North Carolina. W. A. Thomas (July 15): A large brood of adults, which emerged a few weeks ago at Chadbourn, have begun laying eggs heavily and in some cases the young nymphs are developing. Some plots of collards in this vicinity have already been completely destroyed and many others have nothing left except the small green bud. No parasitism has yet been observed.

Georgia. O. I. Snapp (June 23): M. histrionica is abundant this year; ruined a field of collards at Byron.

Kentucky. W. A. Price (July 26): Harlequin bugs have been reported doing damage at Brandenburg, Hodgenville, Owensboro, Barbourville, Berea, Elizabethtown, and Clinton.

Alabama. J. M. Robinson (July 18): The harlequin bug is moderately abundant on collards, turnips, and tomatoes at Auburn and Tuscaloosa.

Colorado. G. M. List (July 23): The harlequin bug is moderately abundant in southern Colorado.

New Mexico. J. R. Eyer (July 5): The harlequin bug is very abundant all over the State.

Texas. F. L. Thomas (July 16): The harlequin bug is very injurious to cabbage in Castro County of the panhandle area.

CABBAGE APHID (Brevicoryne brassicae L.)

Minnesota. A. A. Granovsky (July 11): The cabbage aphid is very abundant and troublesome.

Nebraska. M. H. Swenk (June 20 to July 20): In western Nebraska, from Dawes County to Dundy County, cabbage growers found their plants heavily attacked by the cabbage aphid and related species, during the middle of July.



CUCUMBERS

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

- Indiana. H. O. Deay (July 25): Many inquiries were received from throughout the State in regard to the control of the striped cucumber beetle, from June 24 to July 10.
- Kentucky. W. A. Price (July 26): Striped cucumber beetle larvae were doing much damage to the underground portion of the vines of watermelon and cucumber at Hopkinsville and Flemingsburg.
- Michigan. R. Hutson (July 23): The striped cucumber beetle is very abundant.
- Wisconsin. E. L. Chambers and assistants (July): The striped cucumber beetle is reported as very abundant in practically every county. In Door County it destroyed practically all cucumbers. (Abstract, J.A.H.)
- Minnesota. A. G. Ruggles (July 26): Striped cucumber beetles are very abundant all over the State.
- North Dakota. J. A. Munro (July 18): Striped cucumber beetles are moderately abundant and widely distributed.
- Nebraska. D. B. Whelan (July 20): Adults have killed many cucumber plants.

MELON APHID (Aphis gossypii Glov.)

- Indiana. H. O. Deay (July 25): The melon aphid was reported attacking muskmelon at Swayzee, July 8.
- Minnesota. A. A. Granovsky (July 11): The melon aphid is very common and doubtless will do much damage before the season is over.
- Nebraska. M. H. Swenk (June 20 to July 20): A great deal of trouble was experienced by growers of cucumbers and melons in southern and southeastern Nebraska counties from June 21 to this day, July 21.
- Kansas. H. R. Bryson (July 20): The melon aphid is abundant on cucumbers and melons in southwestern and central Kansas.

PICKLE WORM (Diaphania nitidalis Stoll)

- South Carolina. A. Lutken (July 25): Pickle worms have been very abundant in the vicinity of Clemson College.
- Alabama. J. M. Robinson (July 18): The pickle worm is very abundant in Auburn on pickles and cantaloupes.
- Mississippi. J. Milton (July 20): The pickle worm is abundant on cantaloupes in Hinds County.

MELON WORM (Diaphania hyalinata L.)

- South Carolina. A. Lutken (July 25): Melon worms have been very abundant in the vicinity of Clemson College.

Alabama. J. M. Robinson (July 18): Melon worms are very abundant on cantaloupe.

### SQUASH

#### SQUASH BUG (Anasa tristis DeG.)

North Carolina. R. W. Leiby (July 11): The squash bug is present in more than average numbers.

South Carolina. A. Lutken (July 25): Squash bugs have been very abundant in the vicinity of Clenson College.

Alabama. J. M. Robinson (July 18): Squash bugs are very abundant on watermelon at Seal and on squash at Auburn.

Iowa. H. E. Jaques (July 24): Squash bugs are moderately abundant in Boone County.

Nebraska. D. B. Whelan (July 20): Eggs of this insect are abundant in gardens on squash. Some eggs have hatched, probably 3 or 4 days ago. Mostly in egg stage.

M. H. Swenk (July 20): From June 24 to date the squash bug has been unusually troublesome on cucurbits, especially squashes, in all parts of the State.

Kansas. H. R. Bryson (July 13): Squash bugs are moderately abundant at Manhattan, as well as in other localities where cucurbits are grown.

Utah. G. F. Knowlton (July 12): Squash bugs are now causing serious damage in some fields at American Fork.

New Mexico. J. R. Eyer (July 5): The squash bug is moderately abundant in the Rio Grande Valley.

### ONIONS

#### ONION THRIPS (Thrips tabaci Lind.)

Michigan. R. Hutson (July 8): The onion thrips is causing considerable damage in fields of sweet corn near Marysville.

Nebraska. D. B. Whelan (July 20): T. tabaci is very abundant in many onion beds at Lincoln in spite of efforts at control.

Colorado. G. M. List (July 23): The onion thrips is very abundant in the Arkansas Valley and northern Colorado.

Oregon. D. C. Mote (July 23): Onion thrips are appearing in considerable numbers and doing some damage in the Willamette Valley.

### SWEETPOTATO

#### TORTOISE BEETLES (Cassidinae)

Delaware. L. A. Stearns (July 22): (Cassida) Metritona bivittata Say was reported at Laurel on July 6; it had practically ruined a 48-acre field of sweetpotato.



toes; adjoining fields were lightly to moderately infested.

Maryland. E. N. Cory and Staff (July): Tortoise beetles (Chelymorpha cassidea Fab.) are especially abundant.

Indiana. H. O. Deay (July 25): Tortoise beetles were reported to be doing severe damage to sweetpotatoes in Vincennes July 2.

Mississippi. C. Lyle (July 20): Specimens of M. bivittata and Chirida guttata Oliv. were received from Oxford on June 30 with a report that these beetles were abundant on sweetpotato plants.

#### SWEETPOTATO WHITEFLY (Bemisia inconspicua Quaint.)

Florida. J. R. Watson (July 26): The sweetpotato whitefly (B. inconspicua) is attacking sweetpotatoes in Alachua and other counties.

#### STRAWBERRY

##### STRAWBERRY LEAF ROLLER (Ancylis comptana Froel.)

North Carolina. W. A. Thomas (July 18): While examining strawberry plants at Chadbourn for false chinch bugs it was observed that an unusual number of strawberry leaf rollers had developed on the plants. Pupal skins were very abundant about these plants and a few adults were observed.

Nebraska. D. B. Whelan (July 20): The peak of abundance of the second-brood larvae of the strawberry leaf roller was from July 12 to 25. The first pupa of this generation formed on July 20.

Kansas. H. R. Bryson (July 20): The strawberry leaf roller is reported as causing severe damage in the vicinity of Topeka and also is causing damage in eastern Doniphan County.

#### SUGAR BEETS

##### BEEF WEBWORM (Loxostege sticticalis L.)

North Dakota. J. A. Munro and assistants (July): The beet webworm was quite abundant in Burke, Mountrail, Bottineau, Williams, and McKenzie Counties during the third week in the month. (Abstract, J.A.H.)

F. D. Butcher (July 11): In Benson County, Saturday, I saw some damage to flax by the sugar-beet webworm. It had cleaned out the Russian thistles and had then attacked the flax; the infestation had taken about 15 acres and ran about 3 caterpillars to each yard of flax row. I think all of them were younger than the last instar.

Colorado. G. M. List (July 23): The second-brood beet webworm moths and alfalfa webworm (L. commixtalis Walk.) are moderately abundant in northern Colorado at this time.

Utah. G. F. Knowlton (July 21): The sugar beet webworm is doing serious damage in many parts of Utah. Beets and alfalfa are most seriously affected. Con-

siderable spraying is being done in Cache, Utah, Rich, Dagget, Carbon, and Salt Lake Counties.

MINT

MINT LEAF BEETLE (Longitarsus mothaphagus Gent.)

Indiana. H. O. Deay (July 25): Adults appeared at Warsaw, July 8. The larvae have caused considerable injury throughout the northern part of Indiana. The beetles are common everywhere and were abundant in certain ecological areas. July 21, (G. E. Gould)

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

Florida. F. S. Chamberlin (July 4): A very large third brood of flea beetles, emerged in tobacco fields in Gadsden County where early control measures were not thoroughly applied.

Indiana. H. O. Deay (July 25): The tobacco flea beetle was reported to be doing serious injury to tobacco at Lawrenceburg, June 29.

TOBACCO THRIPS (Frankliniella fusca Hinds)

Connecticut. D. Lacroix (July 15): The tobacco thrips is more widespread than at any time in the past three years. It is occurring on shade-grown Havana seed, and broadleaf tobacco in West Granby, Windsor, East Hartford, and Manchester.

F O R E S T   A N D   S H A D E - T R E E   I N S E C T S

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

New York. E. P. Felt (July 26): The bagworm is locally abundant in Westchester County.

Pennsylvania. J. N. Knull (July 22): The bagworm is very abundant on black locust and arborvitae in Cumberland, Adams, and Franklin Counties.

Delaware. L. A. Stearns (July 22): Bagworms were reported from Newark on arborvitae, July 9, and from Yorklyn and Wyoming the 14th and 19th respectively.

Maryland. Press release, Extension Service, Univ. of Md. (July 18): Property owners are suffering more than usual damage to their trees and shrubs this season through injury by bagworms.

Ohio. E. W. Mendenhall (July 18): Infestation is very severe in Columbus and vicinity.

Indiana. H. O. Deay (July 25): Bagworms were reported attacking boxelder and maple at Indianapolis, July 12, and apple and arborvitae at Evansville, July 19. Defoliating cottowood throughout the southern part of the State, July 16.



Kentucky. W. A. Price (July 26): Bagworms have been very abundant on evergreen trees and shrubs in central and western Kentucky. About 10 per cent of the worms are now full fed and the bags are fastened to the twigs.

Alabama. J. M. Robinson (July 18): The bagworm is very abundant on arborvitae at Selma, Montgomery, Florence, and Haleyville.

Mississippi. C. Lyle (July 20): Reported abundant on arborvitae at Holly Springs on June 28 and at Greenville on July 13. Severe injury to plants at State College has also been observed recently. Moderately abundant in Senatobia, July 14.

Texas. F. L. Thomas (July 22): Correspondents from the following counties stated that bagworms were killing the trees: Galveston, Limestone, Jefferson, Polk, Angelina, and Harris Counties.

#### CANKER WORMS (Geometridae)

Maine. H. B. Peirson (July 21): Heavy defoliation of elms by the canker worms Paleacrita vernata Peck and Alsophila pomataria Harr. was reported from Aroostook County, June 23.

#### SATIN MOTH (Stilpnotia salicis L.)

Maine. H. B. Peirson (July 21): Heavy outbreaks of the satin moth have been reported from Brewer, Bangor, Old Town, and Dover-Foxcroft.

#### WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma S. & A.)

Pennsylvania. J. R. Stear (July 22): The white-marked tussock moth is quite abundant.

Ohio. T. H. Parks (July): A rather serious outbreak of this insect has occurred in Columbus. It has partially defoliated some trees. The larvae have now ceased feeding and are spinning up on the tree trunks and limbs. Defoliation of horse-chestnut trees was seen during the week of July 20 in Cleveland.

Iowa. C. E. Ainslie (July 12): The larvae are appearing in great numbers on the shade trees of northwestern Iowa. They are now about mature and undergoing pupation. No adults have been seen as yet.

Nebraska. M. H. Sponk (June 20 to July 20): This insect is again on the increase in southeastern Nebraska.

#### FOREST TENT CATERPILLAR (Malacosoma disstria Hbn.)

Maine. J. V. Schaffner, jr. (July 20): Reports have been received that M. disstria has caused considerable defoliation of deciduous growths in forests through Milford, Township 3, and Waltham. Several square miles infested.

H. B. Peirson (July 21): Forest tent caterpillars in rather severe outbreaks were observed in Sherman, Mattawamkeag and T. 3. R. 3.

#### WALKINGSTICK (Diapheromera femorata Say)

Pennsylvania. J. H. Knull (July 16): Nymphs of the walkingstick are abundant on foliage in various parts of the State.

BLACK VINE WEEVIL (Brachyrhinus sulcatus Fab.)

Connecticut, New York, and Pennsylvania. E. P. Felt (July 25): The black vine weevil continues abundant, injuring plants here and there, notably at Stamford, Conn., Mamaroneck, N. Y., and Philadelphia, Pa.

APHIDS (Aphididae)

Minnesota. A. A. Granovsky (July 11): Shade trees and shrubs are badly infested with various species of aphids: Monellia caryae Monell, M. carvella Fitch, M. nigropunctata Granovsky attacking black walnuts; and Myzocallis discolor Monell, M. alhambra Davidson, Myzocallis tuberculatus punctatella Fitch attacking oak; and Myzocallis tuberculatus ulmifolii Monell attacking elm.

BIRCH

BRONZE BIRCH BORER (Agrilus anxius Gory)

Maine. H. B. Peirson (July 21): Ornamental birch throughout the State is gradually being destroyed.

Indiana. H. O. Deay (July 25): Specimens which attacked cutleaf birch were received from Seymour, June 29.

Minnesota. A. A. Granovsky (July 11): Bronze birch borers on cutleaf birch are very common, killing trees growing in open places.

BIRCH CASE BEARER (Coleophora salmani Heinr.)

Maine. H. B. Peirson (July 21): Heavy outbreaks in Bar Harbor, Winter Harbor, and towns in between were reported July 18.

BIRCH SKELETONIZER (Bucculatrix canadensisella Chamb.)

Maine. H. B. Peirson (July 21): Birch skeletonizer observed July 18. This insect promises to be very severe again this year.

BIRCH LEAF MINER (Fenusa pumila Klug)

Connecticut. R. B. Friend (July 25): Abundant on gray and white birches throughout the State.

BIRCH LEAF-MINING SAWFLY (Phyllotoma nemorata Fallén)

Maine. H. B. Peirson (July 21): Adults of the birch leaf miner are emerging in great quantities over much of the State.

CATALPA

CATALPA SPHINX (Ceratonia catalpae Bdv.)

Delaware. L. A. Stearns (July 22): The catalpa sphinx was reported from Newark July 1.



Pennsylvania. E. P. Felt (July 25): The catalpa sphinx has been locally abundant in the Philadelphia area.

Ohio. E. W. Mendenhall (July 8): Caterpillars are very numerous in central and southern Ohio, doing considerable damage to catalpa trees, especially Catalpa bungei in ornamental plantings. Many places they had stripped the leaves off before the owner or caretaker was aware of it.

Indiana. H. O. Deay (July 25): Many catalpa trees in the northern part of the State have been completely defoliated.

Kentucky. W. A. Price (July 26): The catalpa sphinx has been rather abundant in Scott and Fayette Counties.

### CYPRESS

#### A CYPRESS SAWFLY (Susana cupressi Roh. & Middleton)

California. H. J. Ryan (April 19): This recently-described species (Proc. Ent. Soc. Wash. 34: 94, 1932), first recorded in 1931 from Ventura and Los Angeles Counties, was reported as active during late April of this year on Arizona and Monterey cypress at New Hall and San Gabriel, Los Angeles County.

### ELM

#### ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

Vermont. H. L. Bailey (July 26): The elm leaf beetle is reported as unusually abundant at Rutland. Moderate feeding was noted as far north as Windsor in the Connecticut River Valley.

New Hampshire. L. C. Glover (July 23): The elm leaf beetle, which was reported as doing a great deal of damage last year, is very scarce this year.

Connecticut. R. B. Friend (July 25): Quite common throughout the State; unsprayed trees are beginning to show brown.

Massachusetts. J. V. Schaffner, jr. (July 21): Thousands of elm trees are being seriously damaged in eastern Massachusetts, more especially in localities where the shade trees are not protected by spraying. Large numbers of larvae were pupating on July 15 at Danvers and Woburn. On July 19 a few adults were seen at Woburn.

Delaware. L. A. Stearns (July 22): The elm leaf beetle was reported at Rockland, July 1.

Maryland. E. N. Cory (July 20): There is a general outbreak throughout the State south and east of Baltimore.

New England and New York. E. P. Felt (July 26): The elm leaf beetle is general and severe, though sporadic injury is evident in southern and eastern New England, and in southern New York.

Ohio. E. W. Mendenhall (July 19): A severe outbreak is occurring on Main and Lagonda Streets in Springfield on about a dozen elm trees.

Kansas. H. R. Bryson (July 20): R. L. Parker reports slight defoliation of elms in Manhattan.

Oregon. D. C. Mote (July 23): B. G. Thompson reports that the elm leaf beetle is not so serious as it has been in previous years.

Washington. E. J. Newcomer (July 21): This beetle has appeared on elm trees in Yakima. It first appeared in the lower end of the Yakima Valley last year, and is reported as very common there this season.

A BARK BEETLE (Scolytus multistriatus Marsh.)

Pennsylvania. J. N. Knull (July): The European elm bark beetle was found working in injured Chinese elms in the vicinity of Philadelphia. The trees had been shipped from the West.

ELM BORER (Saperda tridentata Oliv.)

Ohio. E. W. Mendenhall (July 19): A number of infested American elm trees in Livingston Park in Columbus are dead and dying from the effects of the elm borer.

WOOLLY ELM APHID (Eriosoma americanum Riley)

Maine. H. B. Peirson (July 21): Very heavy outbreaks were occurring throughout central Maine, June 22. Automobiles coated with the honeydew causing much comment.

Nebraska. M. H. Swenk (July 20): Complaints of the curling of the leaves of elm continued to be received until nearly the end of June.

A SAC GALL (Tetraneura ulmisacci Patch)

Massachusetts. E. P. Felt (July 25): The elm sac gall was reported on English elm from West Tisbury, Martha's Vineyard.

A MITE (Eriophyes ulmi Garm.)

Nebraska. M. H. Swenk (July 20): Heavy infestations of elm trees at York with the elm pocket gall were reported during the last week in June.

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

Maine. H. B. Peirson (July 21): European elm scale infestation fairly heavy in Augusta and Bangor, June 20.

FIR

AN APHID (Dreyfusia piceae Ratz.)

Maine. H. B. Peirson (July 21): This European insect, which has invaded Maine from New Brunswick, is killing considerable fir along the coast and this



year spot outbreaks are being found in the Maine Forest district 80 to 100 miles from the coast.

BALSAM FIR WEEVIL (Pissodes dubius Sand.)

Maine. H. B. Peirson (July 21): Fir in many parts is dying from attacks of this beetle. The early drought probably has much to do with the attack.

HEMLOCK

HEMLOCK BARK BORER (Melanophila fulvoguttata Harr.)

Pennsylvania. J. N. Knull (July): In the last couple of years the spotted hemlock borer has played an important part in the death of many hemlock trees throughout the State. Exit burrows were observed in many trees containing green foliage.

LARCH

LARCH CASE BEARER (Coleophora laricella Hbn.)

New England. J. V. Schaffner, jr. (July 21): Moths were noted June 2 to 30 inclusive. On July 12, on ten twigs, each 5 inches in length, a total of 630 eggs were found at Bowdoinham.

Maine. H. B. Peirson (July 21): During the pupal, adult, and egg stages of this insect, the larch is putting out new growth. Heavily infested stands now appear green.

LARCH SAWFLY (Lygaeonematus erichsoni Htg.)

Maine. H. B. Peirson (July 21): The larch sawfly was quite abundant at Whiting, June 21.

Maine and Massachusetts. J. V. Schaffner, jr. (July 21): Larvae were reported in abundance on larch during the first half of July at Bowdoinham, Me., and Lunenburg and North Andover, Mass. At Melrose, Mass., adults from the hibernating cocoons issued during late April, May, and to June 21, inclusive.

LINDEN

LINDEN LACEBUG (Gargaphia tiliae Walsh)

Massachusetts. E. P. Felt (July 25): This lacebug has severely injured linden leaves at Stockbridge. The damage is exceedingly severe, practically entire leaves being discolored and the undersides have large, thick patches of eggs with a diameter of nearly an inch.

LINDEN WART GALL (Cecidomyia verrucicola O. S. )

Massachusetts. E. P. Felt (July 25): The linden wart gall is very abundant on linden at Northampton.

LOCUST

LOCUST BORER (Cyrtene robiniae Forst.)

Minnesota. A. A. Granovsky (July 11): Locust borers on black locust are very common, killing trees growing in open places.

Indiana. H. O. Deay (July 25): The locust borer was reported seriously damaging black locust at Gary, June 28.

MAPLE

GREEN-STRIPED MAPLE WORM (Anisota rubicunda Fab.)

Nebraska. M. H. Swenk (July 20): A severe local outbreak occurred in Burt County near Tekamah, the middle of July.

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

Ohio. T. H. Parks (July 25): We are receiving complaints from western Ohio towns about the cottony maple scale on soft maples. This infestation has existed for several years and centers in Mercer and Darke Counties on the Indiana-Ohio line.

Indiana. H. O. Deay (July 25): Specimens of the cottony maple scale which were severely attacking a soft maple were received from Shipshewana, June 27, and from Marion, July 11.

Nebraska. M. H. Swenk (July 20): The last complaint of the cottony maple scale came from Keith County under date of July 12.

GLOOMY SCALE (Chrysomphalus tenebriosus Comst.)

Mississippi. J. Milton (July 20): The gloomy scale is very abundant on maple trees in Jackson. The injury is very noticeable in that it is killing the branches.

OAK

OAK TWIG PRUNER (Hypermallus villosus Fab.)

Massachusetts, Connecticut, and New York. E. P. Felt (July 25): The oak and maple pruner is exceptionally abundant, numerous dead twigs having been noted near Newburgh, N. Y., Stamford, Conn., and various places in eastern Massachusetts, particularly Hatchville.

Connecticut. W. E. Britton (July 23): Seemingly more abundant than usual in Somers, Greenwich, Vernon, Bridgeport, Bristol, and New Haven.

New York. E. P. Felt (July 26): The oak pruner is very general and somewhat injurious upon oaks on Long Island.



A LEAF MINER (Brachys acrosus Melsh.)

Minnesota. A. G. Ruggles and assistants (June): The oak leaf miner is reported in Ramsey County. Adults are feeding on elm.

PINE

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

Massachusetts. J. V. Schaffner, jr. (July 20): In eastern Massachusetts adults began issuing on June 10 and the issuance has continued to the present date. First hatching at Melrose was noted on June 30.

NANTUCKET PINE SHOOT MOTH (Rhyacionia frustrana Comst.)

Pennsylvania. E. P. Felt (July 25): The Nantucket pine moth was observed seriously infesting a small planting of ornamental pines in the environs of Philadelphia.

Mississippi. C. Lyle (July 20): Injury to slash pine seedlings by larvae was reported July 5.

A PINE SHOOT MOTH (Eucosma gloriola Heinr.)

Connecticut. E. P. Felt (July 25): The white pine tip moth has caused the killing of a number of lateral shoots in Stamford.

SOUTHERN PINE BEETLE (Dendroctonus frontalis Zimm.)

Arkansas, Florida, North Carolina, and South Carolina. R. A. St. George (July): During June, 1932, outbreaks of the southern pine beetle occurred in the Hot Springs National Park, Arkansas, in shortleaf pine, taking trees up to 32 inches in diameter. In Taylor and Lafayette Counties on the western coast of Florida, in slash and longleaf pines, and in the Pisgah National Forest near Asheville, N. C., in shortleaf pine, other outbreaks have occurred. During July an extensive outbreak occurred in Charleston and Dorchester Counties in the eastern portion of South Carolina, in some of the finest loblolly and longleaf pine timber in that region. The beetles were found first in unburned timberland and later in that burned. In the latter area it is believed that more damage is being caused than in the former one.

RED-HEADED PINE SAWFLY (Neodiprion lecontei Fitch)

Michigan. E. I. McDaniel (July 3): Reported to have defoliated all jack pines in a good sized nursery at Grand Haven. The larvae are fully two-thirds grown.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Pennsylvania. J. H. Knull (July 22): The pine leaf scale is very abundant on natural growth of young white pines near Pine Grove Furnace.

Indiana. H. O. Deay (July 25): Specimens were received from Milroy, July 19, where they were attacking blue spruce.

POPLAR

APHIDS (Aphidae)

Nebraska. M. H. Swenk (June 20 to July 20): There has been an unusual abundance of the galls of the aphids Mordwilka vagabundus Walsh and Pemphigus populi-transversus Riley on cottonwood trees from Sheridan, Cherry, Grant, Arthur, and Logan Counties east to Pierce County, thus embracing the entire sandhill region of the State. Reports of this infestation range from June 20 to July 16.

SPRUCE

SPRUCE GALL APHID (Chermes abietis L.)

Vermont. H. L. Bailey (July 26): The spruce gall aphid is present generally, but reported as particularly abundant in Norway spruce plantations in Topsham and Ryegate.

New York. C. R. Crosby (June 28): Infested branch received from Otisville.

SPRUCE MITE (Paratetranychus uniunguis Jacobi)

Connecticut. W. E. Britton (July 25): Branch of hemlock from Norfolk heavily infested and leaves badly injured and webbed together.

Pennsylvania. J. R. Stear (July 22): The spruce mite has been observed injuring Norway spruce.

WILLOW

EUROPEAN WILLOW BEETLE (Plagiodera versicolora Laich.)

New England. E. P. Felt (July 26): The willow leaf beetle is generally abundant in southern New England and New York, seriously injuring the foliage of many willows and in some cases practically destroying them.

Massachusetts. J. V. Schaffner, jr. (July 21): This insect has been reported abundant on willow in many localities. Adults of the first brood issued June 27 to July 9 at Melrose.

WILLOW CURCULIO (Cryptorhynchus lapathi L.)

Massachusetts. E. P. Felt (July 25): The mottled willow borer is somewhat abundant and troublesome at Beverly Farms.

Ohio. E. W. Mendenhall (June 28): The poplar and willow borers are quite bad in pussy willows in some localities in central Ohio.

A LEAF BEETLE (Lina lapponica L.)

Michigan. E. I. McDaniel (June 30): More numerous than usual, feeding on willow trees and devouring the foliage. About 20 years ago we had a similar outbreak, after which the beetles largely disappeared until this year, when they are present in full force.



INSECTS AFFECTING GREENHOUSE  
AND ORNAMENTAL PLANTS

APHIDS (~~Aphididae~~)

Wisconsin. E. L. Chambers and assistants (July): Aphids are occurring in unprecedented numbers on flowers and shrubbery throughout the State (Abstract J.A.H.)

WHITEFLIES (Aleyrodidae)

Georgia. O. I. Snapp (July 19): Whiteflies are very abundant, causing considerable injury to shrubbery around houses in Fort Valley.

FLORIDA WAX SCALE (Ceroplastes floridensis Comst.)

Florida. E. W. Berger and G. B. Merrill (July 21): The Florida wax scale is scarce to moderately abundant at Macclenny and Glen Saint Mary. This scale is widely distributed in Florida and specimens are occasionally received from all parts of the State on many hosts.

COMMON RED SPIDER (Tetranychus telarius L.)

Maryland. Press Release, Extension Service, Uni. of Md. July 18): Evergreens, shade trees, and garden flowers are suffering severe injury from spider mites, according to reports from all parts of the State received by Dr. E. N. Cory. Many fine evergreens have been killed outright and others have been injured so seriously that their value as ornamentals is destroyed, at least for the present. Hollyhock, phlox, ivy, and many other ornamental plants are suffering severe injury, it is said, and boxwood is quite generally infested.

Indiana. H. O. Deay (July 25): The red spider was reported attacking arborvitae at Marion, June 25; cedar at Aurora, June 30; spruce at Linden, July 15; hard maple at Shelbyville, July 21; and silver maple at Clinton, July 21.

Illinois. W. P. Flint (July 20): The red spider has damaged coniferous plantings more than usual during July. It is causing severe damage particularly to juniper, Norway spruce, and arborvitae.

Nebraska. M. H. Swenk (June 20 to July 20): During the period here covered the red spider was quite troublesome on ornamental and house plants, and vegetables in all parts of the State.

Mississippi. C. Lyle (July 20): Severe infestations on garden beans were reported from Smithville and Prairie recently, the correspondent at Prairie stating that his vines had been practically killed. Several complaints of injury to arborvitae and rose were also received during the past month.

AZALEA

AZALEA MEALYBUG (Eriococcus azaleae Comst.)

Alabama. H. P. Loding (July 17): The azalea mealybug is becoming quite a pest on cultivated azalea in Mobile City.

BROOM

A NOCTUID (Tholera reversalis Guen.)

California. R. E. Campbell (July 11): Last year Genista was defoliated in many parts of southern California. Apparently there will be at least a partial recurrence this year, as we have already received several inquiries from Alhambra as to its control.

COLUMBINE

COLUMBINE BORER (Papaipema purpurifascia G. & R.)

Massachusetts. E. P. Felt (July 25): The columbine borer has been reported as quite injurious at Weston.

North Dakota. J. A. Munro (July 18): A columbine borer, apparently P. purpurifascia, destroyed a planting of columbine at Fargo.

DOGWOOD

A LEAF BEETLE (Calligrapha philadelphica L.)

New York. E. P. Felt (July 25): This leaf beetle was reported as feeding abundantly on the foliage of silky dogwood (Cornus amomum) in the Bronx River Parkway near the Mt. Vernon station.

GLADIOLUS

GLADIOLUS THRIPS (Taeniothrips gladioli M. & S.)

Massachusetts. A. I. Bourne (July 26): Several complaints have been brought in of recurrence of the injury last year from the gladiolus thrips. Apparently those growers who took the precaution of cleaning their bulbs during the winter have not suffered as severe damage as last year. With others, however, particularly the small growers with backyard gardens, the pest is becoming quite abundant and again threatening severe injury.

J. V. Schaffner jr. (July 21): Three commercial growers of gladioli in Lowell, Wakefield, and Weston have reported a considerable loss.

Connecticut. W. E. Britton (July 23): T. gladioli is present and injuring gladiolus throughout the State.

New York. P. J. Parrott (July 23): This gladiolus thrips is moderately abundant on plants and flowers.

MOUNTAIN ASH

A SAWFLY (Pristiphora banksi Marl.)

Massachusetts and Vermont. J. V. Schaffer jr. (June 21): Larvae of Pristiphora sp., near banksi Marl., were reported abundant on mountain ash early in July at Melrose, Saugus, Stoneham, and Wakefield, Mass., and at Stowe, Vt.



New York. P. M. Eastman (July 14): Received twig with insects together with the statement that a mountain ash tree was almost entirely defoliated by a sawfly.

### NARCISSUS

#### BULB MITE (Rhizoglyphus hyacinthi Bdv.)

Maryland. E. N. Cory (July 20): The bulb mite was found attacking narcissus bulbs at Emmitsburg.

Nebraska. M. H. Swenk (June 20 to July 20): A Saline County correspondent reported a heavy loss of her gladiolus bulbs this year, as also last year, from the ravages of the bulb mite.

#### LESSER BULB FLY (Eumerus tuberculatus Rond.)

Maryland. E. N. Cory (July 20): The lesser bulb fly was observed on narcissus bulbs at Emmitsburg.

### NASTURTIUM

#### SERPENTINE LEAF MINER (Agromyza pusilla Meig.)

Nebraska. M. H. Swenk (June 20 to July 20): The leaf miner was quite troublesome on nasturtiums over the eastern part of the State.

### PALM

#### A RHINOCEROS BEETLE (Strategus julianus Burr.)

Texas. F. L. Thomas (July 22): This beetle has been unusually abundant during the past month in many areas of south and central Texas. It is especially injurious to palms, burrowing into the bases of these ornamentals.

### PHLOX

#### PHLOX BUG (Lopidea media Say)

Ohio. E. W. Mendenhall (July 14): The phlox bug is very bad on phlox plants in a nursery at Gore, Hocking County. They are very active and may be recognized easily by the dull orange or reddish wing margins.

## INSECTS ATTACKING MAN AND

## DOMESTIC ANIMALS

### MAN

#### MOSQUITOES (Culicinae)

Washington and Oregon. H. E. Stage (June): Aedes aboriginis Dyar were numerous on Bainbridge Island, Puget Sound, during the month of April. There were followed by A. fitchii Felt and Young late in May and these have continued numerous until the present time, June 22. A. aldrichi Dyar & Knab and A. vexans

Meig. have not been very abundant about Portland since the first week in June. A. aldrichi are more numerous than A. vexans this season and because of the high water this year are much more numerous than they were in 1931. A. dorsalis Meig. have been abundant at Sand Lake, Tillamook County, and have caused considerable decrease in the milk production of the dairies in the vicinity of the tidal flats.

#### CHIGGER (Trombicula irritans Riley)

Pennsylvania. J. N. Knull (July 22): Chiggers have been unusually abundant in weed fields in certain parts of Perry and Franklin Counties.

Indiana. H. O. Deay (July 25): Chiggers were reported to be very abundant at Fishers, July 15, and at Lafayette, July 21.

Nebraska. M. H. Swenk (June 20-July 20): Chiggers have been unusually abundant and annoying in eastern Nebraska during the present season.

#### HORSES

##### HORSE BOTFLIES (Gastrophilus spp.)

Indiana. H. O. Deay (July 25): Horse botflies were reported to be so severe a pest in parts of Tippecanoe County the first week in July that it was almost impossible to work horses.

North Dakota. J. A. Munro and assistants (July): Horse botflies were reported as very abundant in Stark, Towner, and Grand Forks Counties. (Abstract J.A.H.)

Nebraska. M. H. Swenk (June 20-July 20): The nose botfly (G. haemorrhoidalis L.) was reported as troublesome in Cheyenne County during the first week in July.

#### HOUSEHOLD AND STORED-PRODUCTS

#### INSECTS

##### TERMITES (Reticulitermes spp.)

United States. T. E. Snyder (July): During June 174 cases of termite damage were reported to the Bureau of Entomology. The following list gives the number of cases reported from each section: New England, 5; Middle Atlantic, 65; South Atlantic, 34; East Central, 16; North Central, 1; West Central, 21; Lower Mississippi, 29; Southwest, 1; Pacific Coast, 2.

##### ANTS (Formicidae)

Georgia. O. I. Snapp (June 29): We have received more complaints than usual of ants in houses and flower gardens.

Mississippi. C. Lyle (July 20): Two new Argentine ant (Iridomyrmex humilis Mayr) infestations have been found during the past month, one at Glen Allen in Washington County and the other at McCarley in Carroll County.



PEA WEEVIL (Bruchus pisorum L.)

Oregon. D. C. Mote (July 23): There is a heavier infestation of the pea weevil in the Willamette Valley this year than ever before.

CLOVER SEED CHALCID (Bruchophagus funebris How.)

North Dakota. J. A. Munro (July 18): The chalcis fly was reported to have destroyed 20 per cent of a bin of alfalfa seed at Bantry, McHenry County.

Nebraska. M. H. Swenk (June 20-July 20): The clover seed chalcid was reported injurious in York County alfalfa fields during the period here covered.

INSECT CONDITIONS IN PUERTO RICO DURING JULY, 1932

G. N. Wolcott

Insular Experiment Station, Rio Piedras, Puerto Rico.

Two outbreaks of the cottony-cushion scale (Icerya purchasi Mask.), from 6 to 9 months old, have been found recently in Pueblo Viejo. The heaviest original infestation, at Palo Seco, is now practically eliminated, in large part owing to spraying and the Australian lady beetle, during dry weather, but the final clean-up is almost entirely due to a light gray fungus, as yet undetermined, which has appeared in great abundance during the recent wet weather. This fungus has also cleaned up a heavy infestation in a pocket in the hills west of Bayamon, but in an adjoining grove, not protected from the wind, the scale is more abundant than a month ago, for conditions have been too dry for the fungus and too wet for the beetles, and the latter have entirely disappeared, despite the fact that there is an increasing abundance of food for them in this grove. At the present time they are known to exist in only one grove, and not in large numbers there.

The agricultural agent at Arecibo reports the chinch bug (Blissus leucop-terus Say) as being destructive to young planted sugarcane, about 4 months old, at Hatillo. This is the first record of injury to this host in Puerto Rico, although the chinch bug has previously been reported on sugarcane on Vieques Island.

Infestations of lima beans (at Isabela) continue to be confined to one species of pod borer, Etiella zinckenella Treit., and have been averaging from 30 to 40 caterpillars per 100 pods. This is several times as many caterpillars as were in the lima beans last year.

R. Faxon and A. S. Mills (May 3): The new facts, so far as Puerto Rico is concerned, were that Fundella cistipennis Dyar was usually present in small numbers in lima beans that were shipped to the States. In previous seasons E. zinckenella appeared to be more prevalent than Fundella but this season Fundella larvae were found more frequently in the pods of lima beans than either Maruca testulalis Geyer or E. zinckenella. The infestations of F. cistipennis were light, the heaviest being 3 per cent, found in a hamper from Isabela. This insect was found to be present in shipments from Loiza, Vega Baja, Arecibo, Isabela, and Adjuntas. E. zinckenella was found in only three shipments of lima beans and four of gandules.

PLANT QUARANTINE AND CONTROL ADMINISTRATION

Notes abstracted from "News Letter," July 1, 1932

(Not for Publication)

MEXICAN FRUIT FLY (Anastrepha ludens Loew)

The operation of some 5,600 flytraps resulted in the taking of 5 adult Mexican fruit flies on the American side of the Rio Grande during May. These flies were taken in four groves, three of which ~~have~~ previously been reported as infested. No infestation had been previously reported from the other grove, which is located about  $6\frac{1}{2}$  miles from the nearest previously reported infestation. Fermenting malt was used principally as the bait in the traps.

In addition to the A. ludens taken in the traps, 181 adult A. pallens Coq. were also taken. The population of pallens seems to have decreased considerably since, with a considerably larger number of traps in operation, the take of pallens showed a decrease of 536 adults from the number taken in April. This fly seems to occur wherever the "La Coma" plant grows. Larvae were taken during the month as far west as Zapata and as far north as Raymondsville, Texas.

GIPSY MOTH (Porthetria dispar L.)

The first gipsy moth egg clusters were observed hatching this year on May 2. Hatching became general about May 9 and the maximum hatch occurred about May 13. These observations were made in several places east of the barrier zone.

Up to and including May 28, there has been found by the Federal force in the barrier-zone area of southwestern Massachusetts and northwestern Connecticut a total of 67 infested sites aggregating 885 new gipsy moth egg clusters. The towns infested in this portion of Massachusetts are New Marlboro, Otis, Sandisfield, Sheffield, and Tyringham. In Connecticut, the barrier-zone towns infested are Canaan, Norfolk, North Canaan, Salisbury, and Warren. The farthest infested point in the barrier-zone area this year, in relation to the New York State line, is approximately 15 miles east of it. Salisbury, Conn., borders on the New York State line.

GLADIOLUS THRIPS (Taeniothrips gladioli M. & S.)

The gladiolus thrips, T. gladioli, has recently been found infesting gladiolus corms in Washington, D. C., and vicinity, according to a memorandum received from the Bureau of Entomology. A brief survey by Bureau entomologists among local growers and dealers resulted in finding infested corms at two Washington stores from which many lots had been purchased, and an infested shipment had just been received by a local grower.